DOCUMENT RESUME

ED 179 785 CE 023 531

TITLE	ISSOE. Field Test--Prototype Student Reporting System for ISSOE. Final Report, Findings and Recommendations.
INSTITUTION	Cornell Univ., Ithaca, N.Y. Inst. for Research and Development in Occupational Education.
SPONS AGENCY	New York State Education Dept., Albany. Div. of Occupational Education Supervision.
PUB DATE	Nov 79
GRANT	79-3C-889GS
NOTE	113p.; For a related document see ED 170 513
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Academic Achievement; Bibliographies; *Data Processing; Information Utilization; Job Skills; Literature Reviews; Needs Assessment; *Performance Based Education; *Program Evaluation; *Student Evaluation; *Student Records; Teacher Participation; User Satisfaction (Information); *Vocational Education
IDENTIFIERS	*Instructional Support System Occupational Educ

ABSTRACT

A prototype manual Instructional Support System for Occupational Education (ISSOE) student reporting system (SRS) developed in 1977-78 (see note) was field tested to determine the feasibility of collecting data on student progress from teachers, processing it at a central location, and returning student informational forms to teachers and students. A review of literature relevant to the development of the SRS, administrator and teacher orientation meetings, and needs assessment meetings with teachers were conducted prior to actual data collection. The field test involved 335 students in eleven auto mechanics and fourteen office practice programs. Once each reporting period teachers indicated individual student performance levels for completed ISSOE competencies matched to Dictionary of Occupational Titles (DOT) job titles. The data was processed at the Cornell Institute for Occupational Education, then returned on informational sheets to students, teachers, administrators, and guidance personnel. Their responses and those of others in the education and work communities were solicited in interviews and meetings. Responses were generally positive. Appendixes, amounting to one-half of the report, include recommended student reporting forms: ISSOE competencies matched to DOT job titles (automotive and office): agendas for administrator and teacher meetings: and minutes of the employers' conference. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Cornell
Institute for
Occupational
Education

Department
of Education
Cornell University

ED179785

ISSOE

Field Test- Prototype Student Reporting System For ISSOE

FINDINGS AND RECOMMENDATIONS

Final Report

November 1979

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Al Edsall

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

CE023531

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Research Pub. 79-5

The New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University, Ithaca, NY 14853.

* * * * *

This project was carried out by the Cornell Institute for Occupational Education, a component of the State Research Coordinating Unit, Division of Occupational Education Planning, Research and Evaluation, for the Division of Occupational Education Instruction, with funds provided by the Division of Occupational Education Supervision, under the terms of Grant No. 79-3C-889GS funded from Vocational Education Amendments of 1976.

* * * * *

Table of Contents

Preface v

Introduction 1

Review of the Literature 3

Bibliography 4

A. Competency-Based Student Reporting System for Occupational Education 8

B. Competency-Based Student Reporting Systems--Assessment of Student Progress 11

C. Non-Competency-Based Student Reporting Systems 12

Summary 13

Overview of ISSOE 15

Conceptual Basis 15

Student Management Subsystem 21

Decision-Making and Planning Component 21

Student Reporting Component 22

Description of the SRS Field Test 27

Purpose 27

Selection of Test Conditions 27

Data Management 31

Results and Conclusions 41

Purpose 41

Needs Assessment 41

Results 43

Student Responses 43

Teachers 46

Counselors 49

Employers 49

Educators 51

Placement Coordinators and Regional Labor Department Representatives 52

Comments from the General Sessions 53

Student Accomplishments during the 1978-79 Field Test 55

Recommendations 57

Appendices 61

Preface

The Instructional Support System for Occupational Education is viewed as the major vehicle whereby competency-based education can be introduced to the occupational education classrooms of New York State. A major requirement for effective competency-based vocational education is clear educational planning, systematic student supervision, and effective reporting of student achievement.

This report summarizes preliminary efforts in 1978-79 to test the feasibility of developing systematic procedures for teacher use in reporting student competency attainment. These procedures were developed in conjunction with a technical steering committee composed of representatives from New York State Education Department, Local Educational Agencies, the New York State Department of Labor, Employers, Institution of Higher Education, Regional ISSOE Coordinators, and others.

We are indebted to the Steering Committee, and to the teachers, students, counselor and administrators who assisted us in these activities.

Special recognition, however, should be given to the contributions of Dr. Alan Edsall, who is responsible for coordinating and carrying out the field tests, to William Kyros and William Smith who assisted in these activities, to Madeline Dean, Judith Nichols, Lois Snyder and others of the Institute who provided back-up support.

This work has contributed materially to the design and development of comprehensive procedures for managing student progress in ISSOE. The system for managing student progress includes procedures not only for student decision-making and the development of individual educational plans, but for competency reporting by DOT titles. These procedures will result in the generation of job readiness profiles that should be of material assistance to employers in considering ISSOE graduates for employment.

James A. Dunn
Professor of Education and
Director, Institute for
Occupational Education

Introduction

This final report describes and provides the results of the 1978-79 field test of a prototype manual-processing Student Reporting System. This prototype was developed during the 1977-78 fiscal year. It is a component of the continuing research and developmental activities conducted to meet State needs in statewide implementation of the Instructional Support System for Occupational Education (ISSOE). ISSOE is composed of three subsystems: (1) Curriculum Development, (2) Management of Instruction, and (3) Management of Student Progress. This report concentrates on the Student Reporting component of the subsystem devoted to the Management of Student Progress. A Handbook has been developed concurrently to describe the ISSOE system and its components.

Statewide implementation, monitoring and dissemination of the ISSOE system and products are managed by the Division of Occupational Education Instruction, Office of Occupational Education, New York State Department of Education, Albany, New York. Field service support for the implementation process is provided by: State University College at Buffalo; SUNY College of Technology at Utica/Rome; and New York Institute of Technology, Westbury, Long Island.

This manual Student Reporting System was developed at CIOE during 1977-78 and 1978-79 with the help of an ISSOE Steering Committee composed of representatives from New York State Education Department, Local Education Agencies, New York State Department of Labor, ISSOE Regional Coordinators, employers, institutions of higher education, and other organizations (refer to Appendix A).

Review of the Literature

A review of the literature was conducted to identify work relevant to the development of the ISSOE Student Reporting System (SRS). The search resulted in the identification of 53 references. Thirty-one articles were selected for review on the basis of affirmative answers to the following questions:

1. Is the SRS competency-based?
2. Does the SRS enhance the placement process?
3. Does the SRS facilitate secondary/post-secondary articulation?
4. Is the SRS adaptable to federal IEP guidelines?
5. Is the SRS compatible with DOL/USOE/OERS systems?
6. Is the SRS useful for:
   - (a) statewide adaptation?
   - (b) reporting to parents?
   - (c) guidance/counseling service?
   - (d) assistance in program management?
   - (e) administrative purposes?

Of the thirty-one articles selected for review, the sixteen most useful have been summarized here. The bibliography which follows lists (I) the references that have been reviewed and summarized; (II) the references that have been reviewed but not summarized; and (III) other references identified but not selected for review. Following the bibliography are the summaries of the articles listed in (I). Those summaries are categorized as follows:

A. Competency-Based Student Reporting Systems in Occupational Education;

B. Competency-Based Student Reporting Systems--Assessment of Student Progress; and

C. Non-Competency-Based Student Reporting Systems.

Bibliography

I. References Reviewed and Summarized.

1. Brodinsky, Ben. Grading and Reporting: Current Trends in School Policies and Programs. Department of Health, Education and Welfare. ED 070-154, 1972.

2. Broome-Tioga-Delaware Board of Cooperative Education Services. Student Performance Report. Binghamton, New York, 1977.

3. Collins, Eugene A. and Dean C. Larsen. Computer Support for a Systems Approach to Instruction: Problem-Statement and Data Entry Techniques. ED 122-847, 1976.

4. Dallas Independent School District, Career Development Center. Student Progress Record-Keeping System. General Information Bulletin No. 126, 1976-77.

5. Frisbie, David A. "Expanded Reporting Forms: Points to Ponder." Clearing House, 49 (1976): 371-72.

6. Goddard, William P. Hillside Administration Reporting Timetabling System. HARTS II. ED 144-535, 1976.

7. Holland College. Record of Achievement--Self-Training and Evaluation Process. Charlottetown, Prince Edward Island, 1974.

8. Kenick, Lois E. "A Grading System Really Based on Mastery." Science Teacher, 40 (1973): 43-45.

9. Kentucky Competency-Based Vocational Education. Orienting Students to the Grading System. Inservice Education Guide--Modules for Implementation, 1977.

10. Knaak, W. Record Pupil Progress. Student Management System--Documentation Manual. #916 Area Vocational Technical School, White Bear Lake, Minnesota, 1977.

11. Marlow, Ediger. "Reporting Pupil Progress: Alternatives to Grading." Educational Leadership, 32 (1975): 265-67.

12. Mountain Plains Education and Economic Development Program. Instructor Data Reporting Procedure. ED 106-670, 1975.

13. Procunier, Robert W. Effective Student Grading and Progress Reporting. ED 106-915. 1975.

14. Southern Westchester Board of Cooperative Education Services. Individualized Student Program in Basic Occupational Education. Port Chester, New York 10573, 1977.

15. Tippin, Mary N. "Reporting Pupil Progress." A paper presented to the annual meeting of the National School Boards Association. ED 137-977, 1977.

16. Vocational Technical Center. Student Performance Report. Monroe County Board of Cooperative Education Services #1, Fairport, New York 14460. 1978.

II. References Reviewed but not Summarized.

1. Fishman, Ronald, and Barton B. Proger. Principles for Collection, Maintenance, and Dissemination of Pupil Records: Operational Guidelines. Department of Public Records. ED 116-374, 1975.

2. Individually Prescribed Instruction. Education U.S.A. Special Report, Washington D. C., 1968.

3. ISS. User's Guide. New York School District 18, New York, New York, September 1974.

4. Long, T. E., and George R. Hudson. Shared Responsibility in Student Record Keeping and Dissemination. ED 080-931, 1973.

5. National Education Association, Washington D. C. What Research Says to the Teacher: Evaluation and Reporting of Student Achievement. ED 099-405, 1974.

6. National Education Association. Reporting Pupil Progress. Research Bulletin 47 (1969): 75-76.

7. National Education Association. Making and Reporting Pupil Progress. Research Summary SI (1970): 1-55.

8. Neilsen, Jack. "Local Educators View a New Grade Reporting Procedure." AEDS Journal, 6 (1973): 97-103.

9. Pargament, Richard. "The Coordination of Program Planning and Evaluation Systems for Occupational Education." A Layman's Guide to the Reporting and Evaluation System for Occupational Education. Volume I, Appendix, ED 105-119, 1973.

10. Pargament, Richard. "The Coordination of Program Planning and Evaluation Systems for Occupational Education." The Implementation of the Reporting and Evaluation System for Occupational Education. Volume I, ED 105-118, 1973.

11. Pargament, Richard. "The Coordination of Program Planning and Evaluation Systems for Occupational Education." A Reporting and Evaluation System for Occupational Education. Volume I, ED 105-116, 1972.

12. Pargament, Richard. "The Coordination of Program Planning and Evaluation Systems for Occupational Education." The Development and Implementation of the Reporting and Evaluation System for Occupational Education (RESOE). ED 105-120, 1974.

13. Program for Learning in Accordance with Needs. American Institutes for Research/Westinghouse Learning Corporation, Education U.S.A., 1971.

14. Sapone, Carmelo V., and Joseph R. Giuliano. "Alternative Methods of Reporting Pupil Progress." NASSP Bulletin 61 (1977): 44-46.

15. Yu, John. The Instructional Management System (IMS), COMSYS 3 Report Dissemination System. The Southwest Regional Laboratory's Instructional Management System. ED 108-630, 1972.

III. Other References Identified but Not Selected for Review.

1. Brinkman, Arlaine F. Descriptive Study of Reporting Practices Used with Elementary Special Classes for Educable Retarded Children in the Minneapolis-St. Paul Metropolitan Area. ED 023-202, 1967.

2. Butterworth, Thomas W., and William B. Michael. "The Relationship of Teaching Achievement, School Attitude, and Self-Responsibility Behaviors of Sixth-Grade Pupils to Comparative and Individualized Reporting Systems: Implications for Improvement of Validity of the Evaluation of Pupil Progress." Educational and Psychological Measurement, 35 (1975): 987-91.

3. Chalmers, Joseph A., and Terrence J. Carroll. "A Flexible Student Reporting System for Registration and Admissions Offices." College and University, 47 (1972).

4. Cody, Ronald P. A Reporting System for Coursewriter Programs. ED 129-308, 1976.

5. Coordinated Academic and Administrative Support Systems for Instructional Innovation. Final Report. ED 150-957, 1977.

6. Douglas, Stephen A. A Computerized System for Multi-instructional Filing and Reporting of Continuing Education Units. Policies and Procedures, Forms, Instructions, and Computer Printout. ED 091-611, 1974.

7. Dupree, Daniel E. and John P. Kapp. "A Student Counseling and Information Management System." AEDS Monitor (1973), 5-7. EJ 087-910.

8. Gronlund, Norman E. Improving Marking and Reporting in Classroom Instruction. ED 102-203, 1974.

9. Guidelines for the Collection, Maintenance and Dissemination of Pupil Records. ED 106-979, 1974.

10. Guidelines for the Collection, Maintenance and Dissemination of Pupil Records. Report of a Conference on the Ethical and Legal Aspects of School Record Keeping. ED 043-947, 1970.

11. Hedges, William D., and Elmer R. Kane. Development and Implementation of a Comprehensive Evaluation and Reporting System for Kindergarten and Primary Schools. Final Report. ED 026-116, 1968.

12. Henle, R.J. Systems for Measuring and Reporting the Resources and Activities of Colleges and Universities. ED 016-309, 1967.

13. Kunder, Linda H., and Paul J. Porwoll. Reporting Pupil Progress: Policies, Procedures, and Systems. ERS Report. ED 148-031, 1977. (Unavailable for review.)

14. Locoste, Aime. Reporting to Parents When Individualizing Instruction. ED 081-849, 1973.

15. Nimnight, Glen, and others. Reporting Pupil Progress in a Continuous Progress School. Committee Report, Annual Summer Workshop (Vail, Colorado, June 7-11, 1964). ED 011-792, 1965.

16. Reporting Pupil Progress in Special Classes for the Mentally Retarded. Special Education Curriculum Development Center; an Inservice Training Program. ED 025-077, 1968.

17. Roberts, Tommy L., and others. "Software Documentation for the Bartlesville Public Schools: Part One." The Bartlesville System: Total Guidance Information Support System. ED 038-704, 1970.

18. Scagliotta, Edward. "Reporting Progress of the Learning Disabled Child." Journal of Learning Disabilities, 2 (1969): 345-62. EJ 007-111.

19. Seitz, Reynolds. "Legal Guidelines for Maintenance and Dissemination of Student Records." Marquette University Education Review, 4 (1973): 16-23. EJ 088-698.

20. The Faculty of Colonel E. Brooke Lee Junior High School. Evaluating and Reporting Student Progress. Grade 8. ED 095-208, 1973.

21. The Faculty of Colonel E. Brooke Lee Junior High School. Evaluating and Reporting Student Progress. Grade 9. ED 095-206.

22. Twining, Geraldine A. "Kindergarten Reporting: A Vehicle for Interaction Between Home and School." Illinois School Research, 7 (1971): 8-11. EJ 040-015.

A. Competency-Based Student Reporting System for Occupational Education.

These are systems designed for reporting Occupational and Vocational Education. Such systems are directly related to the ISSOE-SRS. There are seven student reporting systems in this category:

1. Student Performance Report. Broome-Tioga-Delaware BOCES, Binghamton, NY.
2. Individual Student Program. Southern Westchester BOCES, Port Chester, NY.
3. Student Progress Record-Keeping System. Career Development Center of Dallas Independent School District.
4. Kentucky Competency-Based Vocational Education: Orienting Students to the Grading System. Inservice Education Guide--Modules for Implementation.
5. Record of Achievement--Self-Training and Evaluation Process. Holland College, Charlottetown, Prince Edward Island.
6. Knaak, W., Record Student Progress. Student Management System--Documentation Manual. #916 Area Vocational Technical School, White Bear Lake, Minnesota.
7. Student Performance Report. Monroe County BOCES #1, Fairport, NY.

Description of System

1. Student Performance Report, Broome-Tioga-Delaware BOCES, Binghamton, NY.

This report describes a computerized, competency-based student reporting system. A range of 10-28 competencies is specified for each program area. Many of these competencies identify duties listed for a particular D.O.T. Job Classification. An employability profile, composed of statements regarding attitudes and work habits, forms part of the student performance record.

2. Individual Student Program, Southern Westchester BOCES, Port Chester, NY.

This report describes a computer-based system in which programs are planned for individuals. The courses are modularized and student progress is monitored using the individual program outline as the reporting form.

3. Student Progress Record-Keeping System, Career Development Center of Dallas Independent School District.

The system arranges courses by job areas or clusters, e.g., transportation services. For each job cluster, behavioral objectives are stated. At the end of each reporting period, the student is given a percentage rate for each objective attempted. These ratings are stored in a computer for retrieval and use by teachers, parents, administrators and/or counselors.

4. Kentucky Competency-Based Vocational Education. Orienting Students to the Grading System. Inservice Education Guide --Modules for Implementation.

This report describes a modularized education program, with several modules relating to a job title or occupation. The competencies for each module are checked on an instruction sheet checklist when the student demonstrates competency in the skills. A Competency Evaluation Record form is then prepared to show the student's achievement for the grading period.

5. Record of Achievement--Self Training and Evaluation Process. Holland College, Charlottetown, Prince Edward Island.

This outlines the major curriculum areas and the major competencies necessary to achieve them. When the student accomplishes a competency, performance is rated; ratings are based on industrial performance standards. They are confirmed by an instructor who views and evaluates performance as an employer or supervisor would. A one- or two-page Record of

Achievement provides the student record. The instructor initials and dates each competency achieved.

6. Knaak, W., Record Student Progress, Student Management System--Documentation Manual. #916 Area Vocational Technical School, White Bear Lake, Minnesota.

This report describes a computer-based reporting system. It presents a competency record through a checklist on which competencies are checked off when the student demonstrates attainment. An advisory committee representing industries throughout Minnesota assisted in establishing the list of what a student should be able to do. The system is computerized so that information about the students' progress is placed on progress cards with "Progress Fields" or sections for recording pupil progress.

The system is designed for students working on an individual basis. When the student begins a new task, he or she notifies the instructor. In the "Progress Fields" the instructor records the task identification number and the date it is started. When the task is done and the student meets the terminal performance objective, the instructor records this under the same task identification number in the "Progress Field." A student record of tasks completed is prepared periodically.

7. Student Performance Report, Monroe County BOCES #1, Fairport, NY.

This report describes a competency-based student reporting system. The system uses a reporting form on which macro-competencies or major objectives to be achieved by this student are presented. The student's performance is rated for each competency and in addition each student's "Attitude-Behavior Traits" are rated. The result is a performance report of student competencies and desirable behavior traits.

B. Competency-Based Student Reporting Systems--Assessment of Student Progress.

This category includes systems which may have implications for the ISSOE-SRS.

The reporting systems in this category emphasize and use the competency-based approach for assessing pupil progress instead of the traditional letter-grading system.

Articles and reports include:

1. Brodinsky, Ben. Grading and Reporting: Current Trends in School Policies and Programs. ED 070-154, 1972.
2. Collins, Eugene A. and Dean C. Larsen. Computer Support for a Systems Approach to Instruction. ED 122-847, 1976.
3. Mountain Plains Education and Economic Development Program. Instructor Data Reporting Procedure. ED 106-670, 1975.
4. Frisbie, David A. "Expanded Reporting Forms..." Clearinghouse, 49 (1976): 371-72.
5. Kenick, Lois E. "A Grading System Really Based on Mastery." Science Teacher, 40 (1973): 43-45.

Noteworthy features illustrated in these articles include:

1. Reporting forms designed as checklists and performance charts with stated performance objectives. These forms generally show when the objective/task is started and completed and when the student demonstrates attainment of the objective/task.
2. Student progress record forms, showing the curriculum areas studied and the competencies and job titles achieved.
3. Forms showing learning of terminal objectives at the levels of mastery attained by the student.
4. The storage of stated performance objectives and criterion-referenced tests (CRT) in computer banks, and the determination of scores based on CRT and teacher certification.

C. Non-Competency-Based Student Reporting Systems.

These are systems marginally related to the ISSOE-SRS.

Articles in this category do not emphasize competency-based education but discuss ways of reporting pupil progress that provide more information than the exclusive use of letter grades.

Articles summarized in the third category are:

1. Tippin, Mary N. "Reporting Pupil Progress." A paper presented at the annual meeting of the National School Boards Association. ED 137-977, 1977.

2. Procunier, Robert W. Effective Student Grading and Progress Reporting. ED 106-915, 1975.

3. Goddard, William P. Hillside Administration Reporting Timetabling System. ED 144-535, 1976.

4. Marlow, Ediger. "Reporting Pupil Progress: Alternatives to Grading." Educational Leadership, 32 (1975): 265-67.

Noteworthy features contained in these articles include:

1. Reporting forms with letter grades and the teacher's level of satisfaction with student performance in achievement, attention in class, classwork, homework, make-up work, test scores, laboratory work, attendance, and attitude.

2. Alternatives to letter grading such as:
   (a) parent-teacher conference;
   (b) use of the telephone to report pupil progress to parents;
   (c) teacher observation of pupil performance;
   (d) student-teacher conference.

3. Use of written reports over traditional letter grades. The written reports include checklists of personal, social and academic characteristics of the student.

4. Computerized systems for reporting general information on students such as (a) attendance; (b) students' and parents' names and addresses; (c) student scheduling timetable; (d) statistical information on class size, grades, etc.; and (e) a list of passing and failing students.

Summary

The reporting systems reviewed in categories A and B are related to the ISSOE Student Reporting System in that they are competency-based and thus show potential for the articulation of training with employment services and institutions of higher learning. These systems foster individualized instruction and show greater utility for reporting pupil progress to parents than the traditional letter-grade system. They also provide detailed information which may be useful for counseling. Most operating systems have many common elements which would be of use in a statewide system.

The systems in category C contain many worthwhile concepts for reporting pupils' progress in general education programs. Certain features such as parent-teacher conferences, student-teacher conferences and computerizing student information are potentially useful and should be considered when developing a Student Reporting System for occupational/vocational education.

Many employability profiles appeared in the literature reviewed. Generally, they ranged from a rather simple checklist based on the course outline to rather sophisticated profiles displaying competencies attained, level of attainment, written comments, attendance record and other student data. No employability profiles reviewed related competencies attained to specific Dictionary of Occupational Titles Job Titles.

Overview of ISSOE

This overview of ISSOE presents a description of the context within which the Student Reporting System functions. An understanding of this context will provide insights into the rationale for the SRS design and field-test process.

Conceptual Basis

Following is a description of three basic concepts which underly the design of ISSOE.

First, ISSOE is competency-based instruction. Students are taught to perform those tasks required for entry-level employment in the occupations of their choice. The validity of the criteria for competence is assured by using task analysis in their selection. Using terms derived from the performance of specific tasks facilitates instruction by clearly identifying the targeted competencies which students need to demonstrate to achieve their occupational goals. Because students know that they are developing competencies actually used in the occupation they intend to enter, they feel motivated to improve their skills. They can observe directly in their own behavior whether they are acquiring the competencies they need to achieve their goals. This system helps take the guesswork out of learning from the standpoint of the students since they can readily understand what is required. Further, they can demonstrate that understanding by making increasingly closer matches between their performance and explicitly stated criteria. This method of evaluation, termed criterion-referenced measurement, goes hand-in-hand with the assumption that all students can achieve at some acceptable level of competence.

From the standpoint of the instructor, using competency-based instruction with employer-validated criteria means that instruction will be timely, relevant and well-organized. Communication of requirements to students, organization and individualization of learning activities, and evaluation are all facilitated by working from sets of target objectives. Less effort is necessary to justify an instructional decision to students, parents or administrators when decisions are carefully tied into the achievement of outcomes on which all agree.

Second, ISSOE is modularized. Large curriculum blocks have been broken down into manageable clusters of modules, each one containing major objectives, minor objectives, suggested instructional content and criterion-referenced measurements. These modules or competencies can then be recombined in various ways to form units and courses. Both flexibility and organization are thus achieved. Also, it becomes easier to chart the employability of a student in terms of competencies successfully completed rather than larger curriculum blocks of more vaguely defined content.

Third, ISSOE is a student management system. ISSOE was conceived as a management system to serve the needs of occupational education on a statewide basis. As such, ISSOE sought to develop mechanisms responsive to both career choices of students and personnel demands from the world of work. The articulation of these mechanisms with the instructor's daily activities is facilitated by knowing which jobs the student has targeted and associating ISSOE program competencies with these jobs.

Over the past four years the ISSOE effort essentially consisted of the development of these concepts into a student management system. The system was designed to generate information which would support decision-making to meet the employability needs of students. Two distinct components

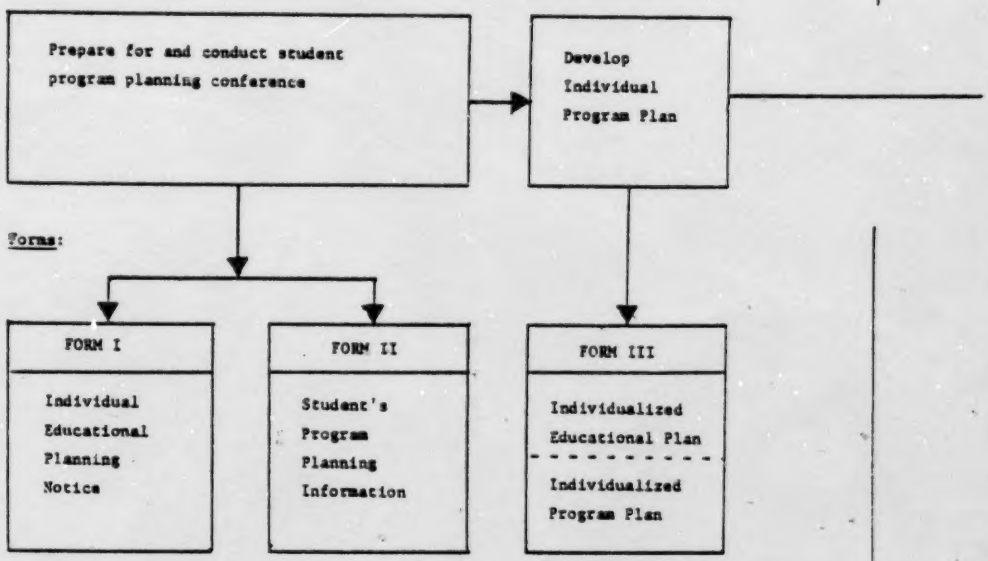
of the student management subsystem (Managing Student Progress) have evolved to date, each with its own clearly defined functions: the student decision-making and planning component, and the student reporting component.

FIGURE I ISSOE STUDENT MANAGEMENT SYSTEM

INDIVIDUALIZED EDUCATION PLANNING SYSTEM

1. Function: To provide teachers with means to help students select occupational goals and plan occupational program.

2. Activities:



3. Forms:

4. Optional Use of Forms:

A. Not use

B. Same form -
-students &/or
-parents &/or
-adminis. &/or
-guid. coun. &/or
-consultants &/or
-other specialists

A. Minimal use

B. Same form - Extensive use with
-teacher only
-teacher/student
-teacher/stud/par.
-teach/stud/par/counselor

A. DOT Plan

B. Open Plan

C. Competency Plan

5. Data Management Options:

A. Manual local

B. Manual regional

C. Manual CIOE

D. Computer local

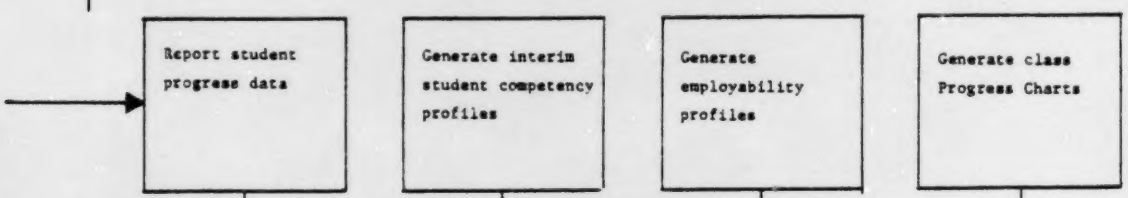
E. Computer regional

FIGURE I (cont.)

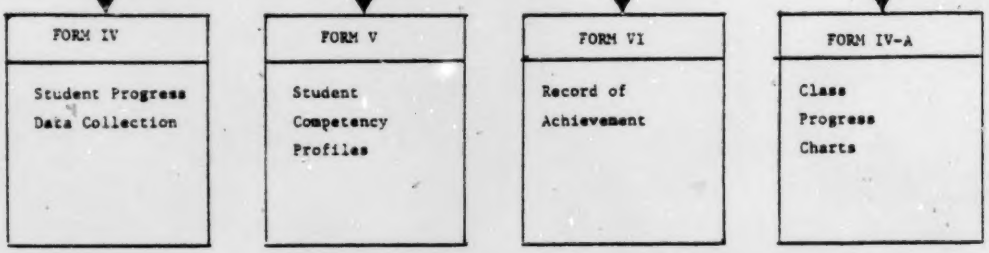
STUDENT REPORTING SYSTEM

1. Function: To monitor the progress students are making toward the attainment of their program goals.

2. Activities:


Report student progress data
Generate interim student competency profiles
Generate employability profiles
Generate class Progress Charts

3. Forms:



4. Optional Use of Forms:

A. Form IV-A Class Progress Chart	A. Form III - Annotated	A. Graphic Display
B. Form III - Open Plan Annotated	B. Form III-A Annotated	B. List by DOT titles
C. Form III-A DOT Plan Annotated	C. Form III-B Annotated	C. List by Modules and Competencies
D. Form III-B Comp. Plan Annotated	D. Form IV-A	

5. Data Management Options:

A. Manual local C. Manual CIOE

B. Manual regional D. Computer local E. Computer regional

Student Management Subsystem

The decision-making and planning component provides the teacher with tools to assist in the student planning phase. In this phase the student selects an occupational goal and develops an individual plan to attain his/her goal. The student reporting component provides feedback information needed by students, teachers, employers and others to assess the progress students make toward their chosen occupational goals.

Decision-Making and Planning Component

This component provides information so that the student can make rational selections of occupational goals. After goals have been selected, the teacher, using ISSOE major-objective files, consults all interested parties to develop the student's individual education plan. Having information on the specific competencies that students are required to learn in attaining their chosen occupational goals, the teacher is able to help students understand what they will need to learn. Some students, of course, enter vocational educational programs with vague or unrealistic ideas about the goals they wish to attain. If this becomes obvious in the planning stage, then the teacher may wish to suggest alternative or supplementary goals. However, there is a danger of underestimating the students' potential to select goals for themselves; teachers should be cautious not to presume that they know a student's limitations in advance.

The positive approach of acting on the assumption that students <u>can</u> attain their goals maintains maximum student interest and motivation. Also, the instructor will indirectly help students to develop a more concrete, realistic view of the world of work and their relation to it by using a competency-based approach. Continual self-assessment against job-related outcomes through criterion-referenced measurement will help students think more realistically about their potential success as graduates.

Figure 1 shows three distinct activities that comprise the planning function of this component. They are: (1) notification of a conference to guide the individual student in planning occupational goals, (2) the joint planning conference itself, and (3) the generation of a program plan. Each activity results in a product which is summarized on a form. Forms I, II and III correspond to the respective activities as shown on Figure 1.

Since it is not within the scope of this report to describe the Individualized Education Planning (IEP) systems in detail, we have limited our discussion to a description of the forms which allow an exchange of data between IEP and student reporting (SRS).

IEP Form I is used to notify students and parents of the time and place of the joint planning conference. Form II, which results from the joint planning conference, concludes with the establishment of the occupational goals and interests of the student. These goals are indicated by specific job titles described in the Dictionary of Occupational Titles and identified by means of D.O.T. Job Titles and codes. The relationship of these jobs in Auto Mechanics and Office Practice has been established in ISSOE files of performance objectives (Appendix C and D). Therefore, the teacher is able to identify ISSOE program objectives that are most compatible with the student's needs, interests and abilities. These objectives are entered on Form III, and this becomes the ISSOE Individual Education Plan for the student. The teacher then instructs the student on these competencies and reports progress by indicating what competencies each has attained. These data provide the basic input to the Student Reporting System.

Student Reporting Component

The Student Reporting component provides feedback as students progress toward their occupational goals by circulating data on their achievement of instructional objectives. At the same time, it delivers information to occupational education managers for decision-making purposes related to program planning and improvement.

Although this description focuses mainly on the utility of the SRS from the teacher's viewpoint, the SRS does have great value as a management tool. Teachers should be aware that individual student reports are to be aggregated to provide information for program planning and evaluation purposes, and how this is to be done. When teachers understand all the benefits that the SRS provides, not only for themselves but also for students and management personnel, they will be more likely to support ISSOE.

The following paragraphs discuss the rationale for the SRS and describe its procedural design. SRS is a competency-based reporting system: its purpose and use contrast markedly with a traditional grading system. Instead of ranking students in a class, SRS provides information on attainment of major competencies which were derived from occupational analyses. Competencies identified in these analyses were grouped into meaningful clusters and stated in terms of student performance. These competencies are continually validated by employers to ensure that they correspond to those required for entry-level employment. The system has built-in flexibility: competencies are updated and revised periodically. This procedure accomplishes two things: it ensures that competencies being measured are still important in the work place; and it introduces new competencies when they become important from the vantage point of the employer.

In order to accomplish this updating, SRS must be able to generate management reports from data on student performance. Management reports will provide occupational education administrators with a device for "fine-tuning" ISSOE, in order to deal with changes in the patterns competencies required by employers.

Figure 1 includes a graphic representation of the SRS. This figure shows that the feedback functions consist of three activities necessary to generate the three required output reports after student data are received on Form IV. They are: (1) the reporting of student competencies. This generates the Student Competency Profile and the Occupational Preparation Profile (Forms V and V-A--Appendix B). (2) The reporting of student

achievements. This generates the Record of Achievement (Form VI, Appendix B). (3) The reporting of class progress. This generates the Class Progress Chart (Form IV-A, Appendix B).

SRS is primarily designed to help teachers report the progress of their students. ISSOE competencies for each student are recorded on the Student Competency Profile (ISSOE Form V and V-A, Appendix B). Each student's program consists of a number of these profiles, each profile containing competencies which, when grouped, constitute a job as defined by the D.O.T. Job Title description.

The teacher has two distinct options for recording attainment of competencies. One option (illustrated by Form IV, Student Competency Profile) is to record four degrees of performance for those competencies which have been attained--"outstanding," "skilled," "satisfactory" and "satisfactory with supervision." This option may be used when a teacher wishes to monitor class and individual progress in terms of quality. Such discriminations allow teachers to correct their instructional techniques both to meet individual needs and maximize group benefits at the same time.

Use of this option should not be interpreted as a way of "sneaking traditional grading methods back into the classroom." In contrast with letter grades, this option does not depart from the principle of measuring students' progress against competencies rather than against other students. The element of subjectivity involved in making a judgment about a particular student is not, of course, unique to traditional grading systems. It can never be entirely eliminated. It is, however, considerably reduced in a criterion-referenced reporting system such as the ISSOE-SRS. This "subjectivity" really represents the irreducible dependence of all student reporting systems on the trained, expert judgment of teachers. Whether teachers elect to use a four-point quality breakdown for each competency or a second option, simply checking those

competencies satisfactorily attained and leaving all others blank, their trained judgments are equally essential. The latter option has the advantage of being less time-consuming for the instructor. On the other hand, it provides less discriminating information.

After the teacher has recorded individual progress on Student Data Collection Sheets using either option discussed above, the results can be aggregated by an ISSOE central processing facility and returned to the instructor in summary form for purposes of classroom management. The Class Progress Chart (Form IV-A, Appendix B) allows teachers to note the progress of an individual student by reading the relevant horizontal line across the chart. Deficiencies with respect to specific competencies may be noted, and plans may be made for correcting these deficiencies. The chart also allows the teacher to monitor group trends by reading the vertical chart columns for each competency. For example, if most students were satisfactory but not skilled at servicing carburetors, the teacher might decide to review and revise the instructional approach for that competency.

Another aspect of ISSOE is concerned with producing competency records and employability profiles. This addresses the need to provide records of student attainments in a form usable by employers, students and parents. A Record of Achievement (Form VI, Appendix B), although not a certificate granting rights or privileges, is designed to satisfy the students' desire for a tangible record of their accomplishments. However, the Record also conveys detailed information in terms of specific occupations for which the student was prepared. This information is essentially an "employability profile" which is of particular use to prospective employers. With this form employers can determine at a glance whether a student was equipped with entry-level skills for a given job as described in the D.O.T.

Again, four degrees of quality or satisfactory performance may or may not be used at the discretion of the instructor, perhaps in consultation with the student. These would be the same qualitative descriptors used in the Student Competency Profile--"outstanding," "skilled," "satisfactory" and "satisfactory with supervision." The other option is simply to check those competencies satisfactorily attained. Those competencies not attained would be left blank.

Description of the SRS Field Test

Purpose

The primary purpose in field-testing a manual SRS was to determine the feasibility of collecting data on student progress from teachers, processing the data at a central location and returning student informational forms to teachers and students. The field test was a trial of the prototype manual ISSOE Student Reporting System developed in Phase III during 1977-78 at CIOE. The description is available in Technical Report #1--ISSOE Student Reporting System Field Test, March 1979.

Field-testing of the ISSOE competency-based Student Reporting System was conducted to:

1. determine the receptivity of teachers in supplying data for a competency-based student reporting system;
2. determine the receptivity of teachers in handling the student and class informational formats returned to them;
3. identify needs that teachers perceived could be satisfied by the competency-based SRS; and
4. identify problems and concerns associated with a competency-based student reporting system.

Selection of Test Conditions

Selection of Program Areas. ISSOE programs in Automotive Mechanics and Office Practice were utilized in field-testing the ISSOE competency-based Student Reporting System. The two programs were selected because, compared with other programs, they are more technically advanced and more generally used in the statewide ISSOE mode.

Curriculum packages for ISSOE Auto Mechanics 1978-79 and ISSOE Office Practice 1978-79, produced by the Bureau of Occupational Education Curriculum Development, New York State Education Department, were utilized to provide the ISSOE program competencies for this field test.

Selection of Test Sites. Local educational agencies in Regions 9, 10 and 11 agreed to participate in the field test. The following criteria were given consideration in the selection process:

1. Urban, small-city and rural sites.
2. Sites with minority students in occupational education programs.
3. Sites with handicapped students in occupational education programs.
4. Sites stressing enrollment of students of non-traditional sex in occupational education programs.
5. A site in an area with high unemployment rates.

Selection of Teachers and Students. Fourteen Office Practice and eleven Auto Mechanics teachers from the three regions submitted data regarding individual students in their classes. The ISSOE Regional Coordinator in each region selected volunteer teachers to participate in this research effort. Participating teachers were asked to submit data from only one class section. Twenty-five teachers from the following LEAs submitted student performance data to test the SRS:

Cato-Meridian Central High School
Cayuga-Onondaga BOCES
Central Technical High School, Syracuse City Schools
Dansville Central High School
Fayetteville Central High School
Greece-Athena Central High School

Livingston-Steuben-Wyoming BOCES
Monroe BOCES #1
Newark Central High School
Onondaga-Madison BOCES
Ontario-Seneca-Yates-Cayuga-Wayne BOCES
Oswego BOCES
Rochester City Schools
Steuben-Allegany BOCES
Tompkins-Seneca-Tioga BOCES

The Student Reporting System for ISSOE must function for all students in occupational education programs. Therefore, students were selected as follows:

1. Ten students per class were randomly selected to receive individual profiles (Forms E and F). Therefore, each class contained students receiving forms and students not receiving forms except in classes with fewer than eleven students.

2. Selections were reviewed with local guidance personnel to to determine assignment to one or more of the following categories:

   a. high achievers b. medium achievers
   c. low achievers d. handicapped e. minority

This selection provided an improved basis for assessing the utility of the Student Reporting System for ISSOE across a wide range of student populations.

Selection of Job Titles. The D.O.T. Job Titles selected were representative of potential D.O.T. Job Titles from Automotive Mechanics and Office Practice. These titles were not all-inclusive but were selected

as representative job titles to test the system. Selections were reviewed with representatives of Automotive Mechanics teachers, Office Practice teachers, State Education Department personnel and the ISSOE Steering Committee.

Only ISSOE competencies clearly related to the D.O.T. Job description were matched to the D.O.T. Job Title. The D.O.T. Job Title and ISSOE competencies were selected to determine the utility of the SRS but they do not represent a definitive set in each area. The selected matches had the unanimous approval of researchers and field personnel.

Before the SRS is implemented, a more precise validation must be conducted to determine appropriate D.O.T. Job Titles for each occupational education area and ISSOE program objectives must be matched more definitively to the D.O.T. Job Titles.

The following D.O.T. Job Titles and code numbers filled the above criteria:

A. Automotive Mechanics

915.684-010 Tire Repairer or Servicer
915.687-018 Lubrication Servicer
807.664-010 Muffler Installer
915.477-010 S. S. Station Attendant
915.467-010 Service Station Attendant
620.281-026 Brake Mechanic
620.281-038 Front End Mechanic
620.281-066 Tune-Up Mechanic
806.361-026 Get-Ready Mechanic

B. Office Practice

237.367-038 Receptionist
206.362-010 File Clerk I
214.326-026 Stock Clerk
203.582-066 Typist-Clerical
209.562-010 Clerk, General

Appendices C and D, ISSOE Competencies Matched to D.O.T. Job Titles, match all ISSOE competencies identified to date and relate them to specific D.O.T. Job Titles. Appendix C is for the Automotive Mechanics Program, Appendix D for Office Practice.

Data Management

This section describes how the data for the Student Reporting System were managed during the field test. Included are accounts of the conferences and meetings held at the various test sites and also descriptions of the SRS forms and how they were distributed at these conferences. Each activity is numbered in the sequence in which it was performed.

Data Input: Activity 1.* Teachers made a one-time input per reporting period of individual student performance identifying completed ISSOE Competencies on Form I. This was mailed to CIOE for processing. A one-time data input during April or May was utilized for the 1978-79 field test phase. The data-collection process consisted of the following steps.

1. Rosters of student names were supplied by teachers to CIOE prior to the end of the first reporting period.
2. Names were typed on blank Form I at CIOE.
3. Form I with student names typed in was sent to individual teachers approximately seven days prior to date reporting period ended. (Dates were identified at beginning of year for individual LEAs.)
4. Teachers filled out Form I at end of reporting period and returned it directly to CIOE. Teachers provided a performance-level indicator as follows for each ISSOE Competency a student had completed:

* Recommended data collection procedures. A one-time data input was used to field-test the system.

Level Indicator	Description
W	Satisfactory with Supervision. Performs task, requires considerable supervision/ assistance. Meets minimum job standards.
X	Satisfactory Performance. Performs task satisfactorily, but requires periodic supervision/assistance.
Y	Skilled Performance. Performs task without supervision/assistance with proficiency in speed/quality.
Z	Outstanding Performance. Performs task without supervision/assistance, can lead others in performing task. Has initiative and adaptability to special problems.

5. For subsequent reporting periods, a copy of the previous Form I was sent to the teacher approximately seven days prior to the end of each reporting period. The teacher added only new competencies completed during the reporting period.

6. Completed Form I was sent directly to CIOE for processing.

7. Requests were made to ISSOE Regional Coordinators to remind teachers who missed the reporting date.

8. Data received from individual LEAs were processed at the interval agreed upon and returned on the dates previously determined. Classroom data received were processed by priority. First priority was to process on-time data, second priority was late data and third priority was special requests.

Data Processing: Activities 2-7. When data from teachers were received at the processing centers they were dated and coded according to Region, School, Teacher, Program and Section. During the field test, CIOE was the processing center. Data were then transferred to the output informational sheets on these forms:

1. Master Form I--Class Progress Report,
2. Form E--Student Competency Profile,
3. Form F--Occupational Preparation Profile.

Necessary copies of Forms E, F and I were made and filed at CIOE according to the above coding. Forms E, F and I were processed and returned to teachers.

Schedule of Events. The four meetings which were scheduled at each region and test site are noted below. The agendas of each meeting are in Appendix E of this report.

March: Orientation meetings with administrators, Regional team of ISSOE Steering Committee and others.

March: Meetings with teachers of Automotive Mechanics and Office Practice. Interview teachers to determine their needs at regular regional ISSOE teachers' meetings.

April: Meetings with teachers of Automotive Mechanics and Office Practice. Orientation and training of teachers to obtain student performance data at regular regional ISSOE teachers' meetings.

May: Meetings with teachers and others. Critique of SRS output information, formats and process at regular regional ISSOE teachers' meeting. (Participants' remarks are summarized later in this report.)

Description and Distribution of Reporting Forms. The main purpose of the meetings was to familiarize students, teachers, administrators, guidance personnel and various other parties with the ISSOE-SRS reporting forms. This was accomplished by distributing the forms at the various meetings and explaining their function and the procedure for their

distribution. Following is an outline of the reporting forms used and the distribution plan.

Reporting Forms:

A. Class Progress Charts--Form I (pages 73-74)

Class Progress Charts displaying individual student progress in attaining ISSOE competencies were produced. These charts were updated at subsequent reporting times.

Form I received from teacher:

1. Master form updated with new data.
2. Copies made for distribution.
3. Copies distributed.
4. A copy filed for future use.

B. Individual Student Profile--Forms E and F (pages 35-38)

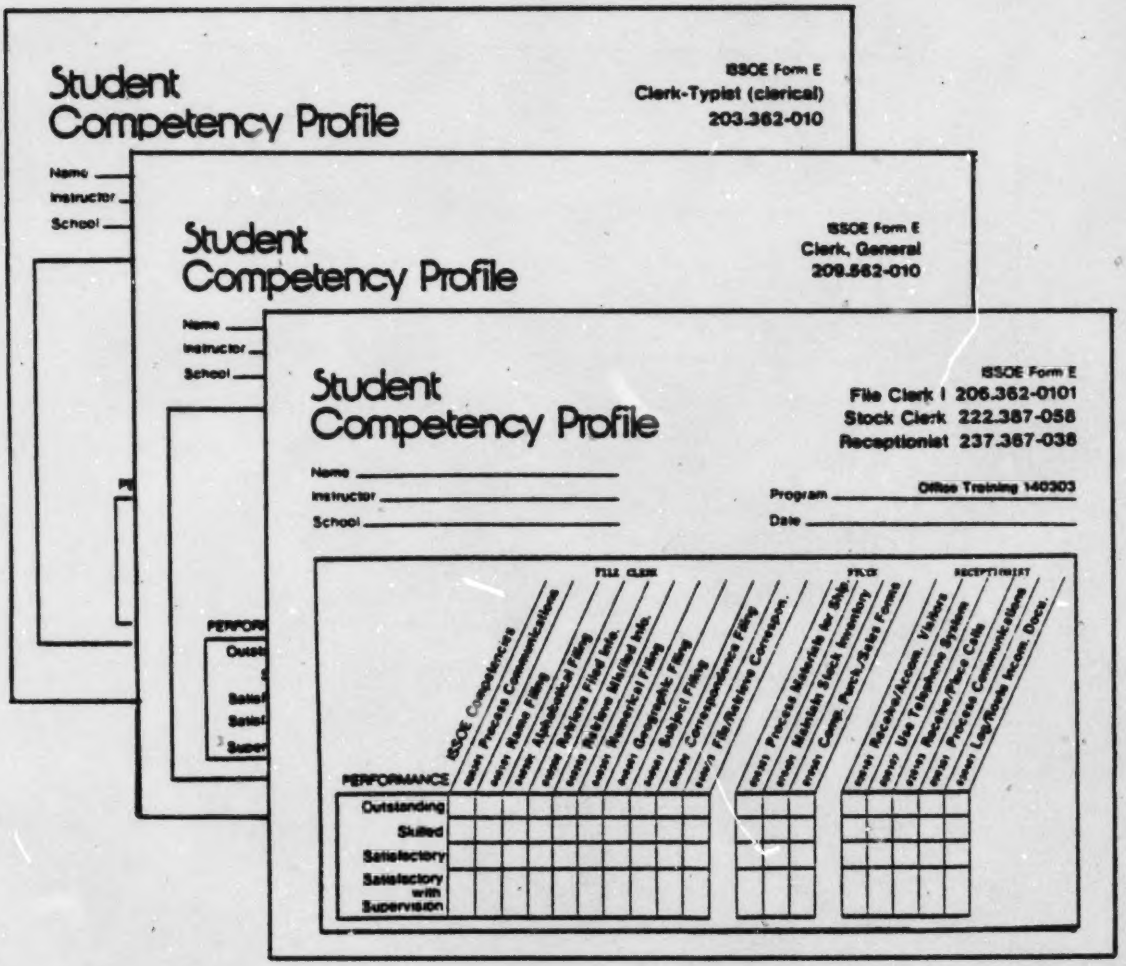
Individual student progress was displayed on Forms E and F.

1. Data from Form I transferred to appropriate Individual Student Profile Forms (E and F) and retained as master file copies.
2. Forms E and F duplicated and assembled for distribution.
3. Students did not receive duplicates of completed ISSOE Competency Profile (Form F) during subsequent reporting.

Distribution Plan:

A. Students

Each student received a copy of appropriate Individual Student Profiles (Forms E and F) after they had been returned to the teacher.


Student
Competency Profile
ISSOE Form E
Clerk-Typist (clerical)
203.362-010
Name
Instructor
School
Student
Competency Profile
ISSOE Form E
Clerk, General
209.562-010
Name
Instructor
School
Student
Competency Profile
ISSOE Form E
File Clerk I 206.362-0101
Stock Clerk 222.387-058
Receptionist 237.387-038
Name
Instructor
School
Program Office Training 140303
Date
FILE CLERK
STOCK
RECEPTIONIST
ISSOE Competencies
PERFORMANCE
Outstanding
Skilled
Satisfactory
Satisfactory with Supervision

Student Competency Profile

ISSOE Form E
Tire Servicer 915.684-010
Muffler Installer 807.664-010
Lubrication Servicer 915.687-018

Student Competency Profile

ISSOE Form E
Brake Mechanic
602.281-026

Student Competency Profile

ISSOE Form E
Front End Mechanic 620.281-038

Student Competency Profile

ISSOE Form E
New Car Get-Ready Mechanic
806.361-026

Student Competency Profile

ISSOE Form E
Tune Up Mechanics
620.281-066

Student Competency Profile

ISSOE Form E
Self-Service Station Attendance 915.477-010
Service Station Attendance 915.467-010

Name _____
Instructor _____
School _____

Program Automotive Mechanics 170302
Date _____

PERFORMANCE / ISSOE Competencies	Change Engine Oil/Filter 810101	Lubricate Chassis 810101	Rotate Tires 810901	Repair Leaking Tire 810902	Balance Wheels 810903	Inspect/Test Cool. Sys. 820101	Flush/Refill Cool. Sys. 820102	R/R Min. Parts Cool Sys. 820103	Service Sec. Ign. Comps. 820201	R/R Comp. of Lighting Sys. 840101	Start Engine Booster Cab. 840201	Service/Test Battery 840202	Clean/Polish Interior 860201	Clean/Polish Exterior 860301	Clean/Treat Vinyl Top 860302
Outstanding															
Skilled															
Satisfactory															
Satisfactory with Supervision															

ISSOE Form F

Occupational Preparation Profile

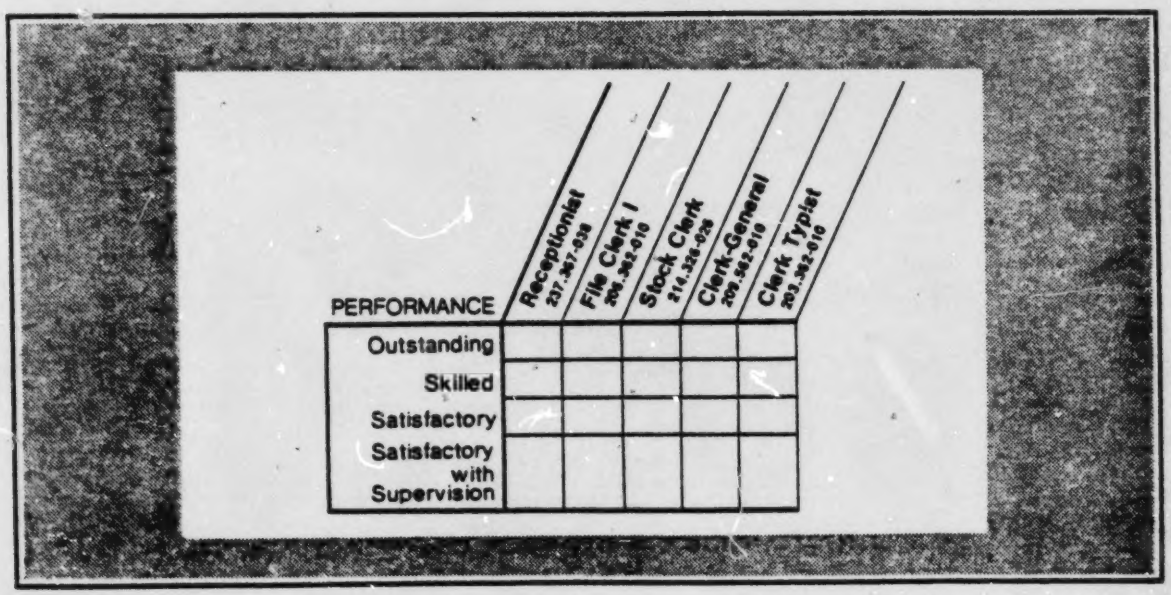
Student _____

Teacher _____

School _____

Program Office Training 140303

Date _____



Occupational Preparation Profile

ISSOE Form F

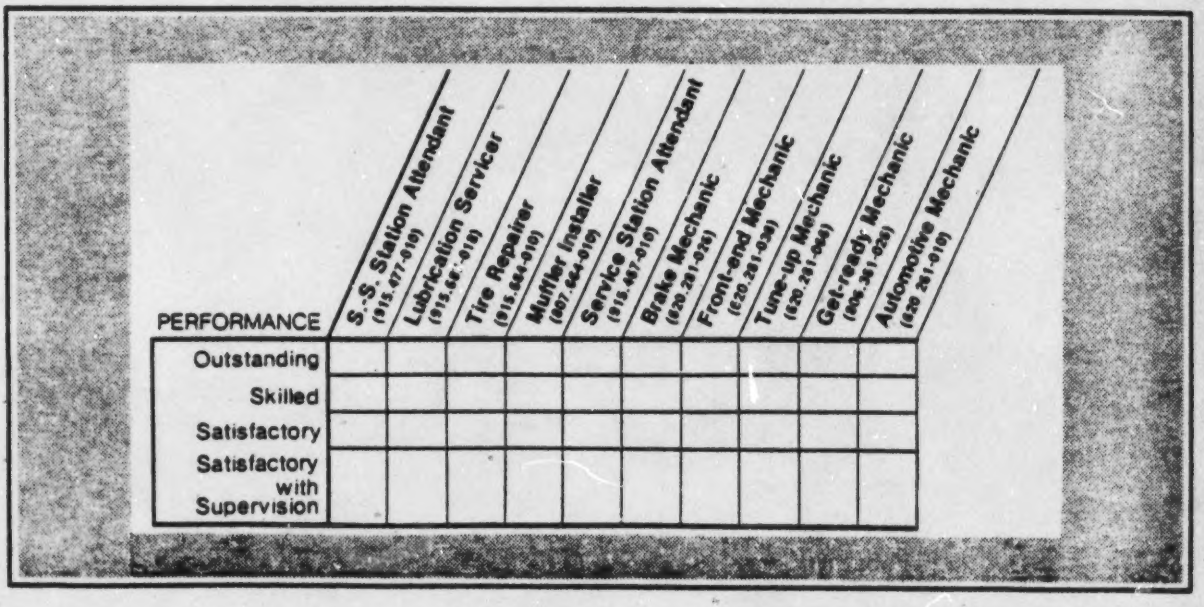
Student _____

Teacher _____

School _____

Program Automotive Mechanics 170302

Date _____



B. Teachers

1. Received two copies of Forms E and F:
   - One for teacher's file,
   - One for individual student.
2. Received two copies of Form I:
   - One for teacher's file,
   - One for display.

C. Guidance Personnel

Received Forms E and F only: one copy for each student.

D. Administrators

Received Form I only. Immediate administrator received one copy of the Class Progress Chart per reporting period.

E. Others

Requests for copies of completed Forms E, F and I are addressed to the individual Director of Occupational Education at the Local Educational Agency, which is generally responsible for duplicating completed Forms E, F and I.

Special requests for additional copies of Forms E, F and I from persons in the Local Educational Agency must have the approval of the Director of Occupational Education or appropriate administrator. Handled on a priority basis.

First priority is to provide first-run output formats for end-of-period reports. Economic factors may limit the numbers of special requests handled.

Samples of informational formats (Forms E, F and I) are distributed to State Education Department Division of Occupational

Education Instruction, ISSOE Steering Committee members, educational researchers and others as needed.

On sample output informational formats provided to persons other than local school personnel, names of students are deleted to protect their privacy. Also, the master file at CIOE is maintained in a locked office.

The above procedures were determined prior to the field test to take care of other requests. There were no such requests during the field test.

Results and Conclusions

Purpose

Field-testing of the ISSOE competency-based Student Reporting System was conducted to:

1. determine the receptivity of teachers in supplying data for a competency-based student reporting system;
2. determine the receptivity of teachers in handling the student and class informational formats returned to them;
3. identify needs that teachers perceived could be satisfied by the competency-based SRS; and
4. identify problems and concerns associated with a competency-based student reporting system.

Needs Assessment

Prior to the actual collection of data in each region, the ISSOE Regional Coordinator arranged a meeting with teachers to solicit their cooperation in supplying data. Teachers were requested to identify needs that would be satisfied by a competency-based student reporting system.

Needs were identified using group-interview techniques during these meetings. Needs were grouped in three categories: (1) relating to individual student progress, (2) relating to instruction, and (3) relating to evaluation.

1. Student Progress

   a. A need to depict student progress in competency-based occupational education programs to students, parents, teachers, other school personnel and employers in a way that will not be cumbersome.

b. A need for more descriptive information on individual student progress to be used in conferring with students, parents, administrators, guidance counselors, placement coordinators and possibly employers.

c. A need for individual students' progress displayed as total class progress to be used in discussions with administration.

d. A need for student progress information to be used in preparing orientation programs and recruitment activities.

2. Instruction

A need to relate instructional strategies and materials to individual ISSOE major objectives. Teachers recognized that this may not be directly related to the SRS. However, they suggested that information on the progress of particular groups of students may be correlated with particular ISSOE major objectives in the future. This might provide a basis for analysis of instructional strategies and materials, suggesting alternative approaches for particular groups of students.

3. Evaluation

a. A need to improve the evaluation of instruction. Teachers stressed that it is not appropriate to measure progress toward a broad employment goal, since students need more experience to become full-fledged mechanics, carpenters, welders, etc. Instead, teachers must develop ways of helping students acquire the skills that employers expect entry-level employees to have mastered.

b. A need to report the progress students make in programs to advisory committee members so that they can evaluate progress and make recommendations concerning program needs and policies to the administration.

c. A need for better identification and documentation of the necessity of personal self-improvement in technical knowledge and professional development among educators.

Results

Twenty-five teachers (11 Auto Mechanics and 14 Office Practice) in Regions 9, 10, and 11 supplied data on the progress of 335 students in ISSOE occupational education programs. These regions are demographically diversified and range from fully urban to small-town and rural in character. Classes reported were from City School Systems, Comprehensive High Schools and BOCES Area Educational Centers.

Teachers attended an orientation session, filled out and mailed data collection forms to CIOE, handed out returned informational sheets to students, reviewed the student informational forms and Class Progress Charts and attended a critique session to assess the process and products. Teachers were very cooperative and encountered little difficulty in filling out the ISSOE data-reporting forms.

Student Responses

Impromptu interviews with students* (20 in Auto Mechanics and 24 in Office Practice) were conducted. These obtain student impressions about how they expected to use, and what they actually did with, the ISSOE-SRS information reports (Form E--Student Competency Profiles, Form F--Occupational Preparation Profile, and Form I--Class Progress Chart).

The information in Table 1 shows that students used reporting forms E and F to communicate with other students in class, with teachers, and with parents regarding their progress. Students did not discuss the

* These interviews were suggested by teachers and administrators and conducted with the approval of the Occupational Director.

reporting formats with employers or potential employers, principals or other people. This was probably because they were interviewed approximately two weeks after they received their reporting forms.

Students were generally positive about their individual reporting forms. They indicated they could be valuable in (see Table 1):

1. Getting a job,
2. Discussing their progress with teachers,
3. Checking progress with other students,
4. Showing progress to parents, and
5. Providing motivation to complete more program objectives.

It is interesting to note that all but two Office Practice students felt that SRS forms would be valuable in discussions with guidance counselors, whereas only two Auto Mechanics students indicated they would be of some value in this manner.

TABLE 1

ISSOE Student Reporting System
Summary of Students' Interview

Question	Response			
	Auto		Office	
	Yes	No	Yes	No
1. Is the ISSOE System used in your occupational class?	20	0	14	10
2. Have you seen the ISSOE Class Progress Chart?	18	2	18	6
3. Did you receive an ISSOE Student Reporting Form?	11	9	16	8
4. If you did not receive a student reporting form:*				
a. Have you seen them?	4	**	5	3
b. Would you want one?	4	0	5	3
5. Have you talked about or shown the ISSOE Student Reporting Form to:*				
a. Students in your occupational class?	12	2	11	6
b. Other students?	2	12	1	16
c. Your occupational teacher?	14	0	17	0
d. Other teachers?	2	12	1	16
e. Guidance counselor?	1	13	1	16
f. Parent?	6	8	7	10
g. Employer or potential employer?	0	14	0	17
h. Principal?	0	14	0	17
i. Other?	0	14	0	17

	Response***					
	Auto			Office		
	VV	SV	NV	VV	SV	NV
6. Your reaction to value of SRS forms and information.						
a. Value of Class Progress Chart.	3	13	4	3	11	10
b. Value of E and F forms.	9	11	0	8	16	0
c. Usefulness in getting a job.	10	10	0	13	10	1
d. Usefulness in discussion with teacher.	4	15	1	11	13	0
e. Usefulness in discussion with guidance counselor.	0	2	18	15	7	2
f. Usefulness in checking with other students.	0	18	2	4	12	8
g. Usefulness in showing progress to parent.	4	16	0	14	10	0
h. Usefulness in providing motivation to complete more objectives.	3	17	0	13	9	0

* The Field Test Design called for only one-half of the students in each class to receive student reporting Forms E and F.

** Five were not sure.

*** VV = Very Valuable
SV = Some Value
NV = No Value

Teachers

During the critique sessions teachers were very positive in their reactions to the SRS information forms (Student Competency Profile--Form E, Occupational Preparational Profile--Form F, and the Class Progress Chart--Form I). All but one teacher indicated that they would provide data for a similar effort next year and would encourage other teachers to participate.

The following list is a summary of positive reactions from the teachers' critique sessions regarding the ISSOE-SRS in their own words.

1. The forms are useful for assessing students' progress and ability.
2. The forms clarify the performance objectives for both the teachers and the students. [Matching ISSOE major objectives to D.O.T. Job Titles shows the relationship.]
3. The correlation between the ISSOE curriculum and Student Reporting System is especially useful in showing advisory committee members what a student has accomplished in an occupational education program.
4. The system makes it easy to determine each student's performance on various tasks--his/her strengths and weaknesses. There is no chance of total failure because every student can master some skills.
5. The Student Competency Profile and the Occupational Profile should be helpful for placement and coordination among teachers, students and employers.
6. The Student Reporting System marks a start toward eliminating grades and allowing vocational education to develop specific skill areas.

7. It will be good for guidance because it gives a comprehensive summary of the students' skills [competencies].
8. It provides goals for the students and gives them direction and motivation. Most students involved think they will learn more under this system.
9. The above-average student enjoys having his/her achievement posted.
10. The student profile reporting forms [E and F] are a good way of showing student progress.
11. Matching ISSOE program competencies to actual jobs gives us a way to ensure that students are completing competencies related to the jobs they have selected.

The following list is a summary of negative reactions from the teachers' critique sessions regarding the ISSOE-SRS in their own words.

1. Too much paper work involved.
2. The educational terminology (jargon) used is not always understood by the students and parents.
3. There is need for more descriptive phrases in assessing performance.
4. It is too time-consuming for the teachers, because of the paper work.
5. It is too complex and cumbersome for the teacher.
6. The rating system used was not correlated to the grading system used in the classroom work.

7. The progress chart is not confidential for the below-average and slow students. Some may be discouraged when the chart is made public.

8. The system allows no points for student behavior.

The following concerns regarding the ISSOE Student Reporting System were raised during the teachers' critique session:

1. The Student Reporting System is incompatible with other subjects.

2. There is need for more objective means of evaluating student responsibility and ability to accomplish tasks independently.

3. Provision should be made to show repetition of tasks on the charts.

4. Employers may be led to believe that students are more capable than they are.

5. What will be the acceptance and use of the Student Reporting System by the employment constituency?

6. There is need for more input from employers.

7. Who has access to the information and under what conditions is it monitored?

8. There is no system for grading on absence.

9. A hope that the program will not have to be terminated because of the lack of funds as others have.

It appeared that the two most positive features of the ISSOE-SRS for teachers were:

1. The profile display of each student's progress toward a job.

2. Expectations that the system would eventually produce the "report card" at the end of the reporting period.

Counselors

A phone interview was conducted with guidance counselors in schools involved in the field test to solicit their responses to the ISSOE Student Reporting System information and formats. Each counselor received a copy of the student's individual reporting forms E and F at the same time they were sent to the teacher.

The counselors indicated that:

1. These forms were a more descriptive display of what students can do and were useful:
   a. to confer with students, parents, etc., regarding individual student progress in occupational education programs, and
   b. as a reference when employers call regarding competencies students have developed and jobs they are prepared for.
2. The forms provide an improved basis for understanding the jobs for which students can prepare in occupational education programs. Counselors understand the Dictionary of Occupational Titles system and these forms use the D.O.T. Job Titles.
3. Updating student files would increase counselors' work loads if an individual sheet is used for each D.O.T. Job Title.
4. From a guidance point of view, in terms of job referral, employers simply do not request this type of detailed information if indeed they call at all.
5. The Competency Profiles are given too late in the students' high school experience to be of any use in career planning--more information is needed to understand the system thoroughly.

Employers

An employers' conference was conducted to obtain reactions from employers of automotive mechanics and office personnel in regard to the

ISSOE Student Reporting System and the student reporting formats. The system was reviewed and the employers made the following recommendations:

1. Any recruiting-system form that might be used on a statewide basis should include sometning about attendance and attitude of the potential employee. Employers considered general attitude as significant as the particular skill (competency) record of the applicant at entry level. Employers of office workers stressed the importance of attitude, while employers of auto mechanics stressed that skill competency was most important for their entry-level employees.

2. Instructors rating students' achievement in specific competencies should approach evaluation as an employer would. Employers stressed that instructors should have extensive, up-to-date knowledge in their field. They should be continually renewed by regular exposure to innovations in their technical field.

3. ISSOE should prepare a "Master Dictionary" of each occupational program for employers. This dictionary should identify the competency, specifying both the criteria for evaluation of the competency and the conditions under which these criteria were satisfied. (It was explained that the ISSOE curriculum package for each occupational program area would provide for this need.)

4. Applicants at entry level should bring a resume to the job interview. No standard form or format was suggested. It was, however, stressed that applicants who brought a resume were assuring themselves a great advantage in their search for employment. The ISSOE Record of Achievement should be included as part of the resume.

5. The ISSOE Record of Achievement, which displays D.O.T. Job Titles on the front and shows each D.O.T. Job Title with corresponding ISSOE competencies, is the preferred format for reporting student progress.

Employers of office workers felt that since, at entry level, they are seeking individuals with general work skills, a single checkmark could be used to indicate satisfactory performance. They discussed the usefulness of a four-point performance differential (Outstanding, Skilled, Satisfactory, Satisfactory with Supervision) and concluded that it provided a good indicator of an employee's potential for advancement. Employers of auto mechanics felt that this performance differential would provide useful information when selecting entry-level employees.

All agreed that the forms should fit local needs. Employers stressed that if the Student Reporting System is generally adopted, it would provide ongoing checks on the judgments of instructors. As instructors realized that their evaluations were being used in employment decisions, they would expend more care on the evaluation of students. The system would thus stress the accountability of both students and instructors: such a circular reinforcement would be mutually beneficial and would help build relations between the various participants in the educational enterprise and the employment community.

Most employers indicated that their companies had hired graduates of local occupational education programs during the preceding years. Documentation of the skills of these applicants had left much to be desired. References were solicited as a matter of course and employers generally were interested in the opinions of the instructors concerned. A consensus emerged regarding the desirability of a uniform listing of competencies achieved by students. (See Appendix F.)

Educators

Educators at the "Employers' Conference" (Directors of Occupational Education, Occupational Education Regional Planners, ISSOE Regional Coordinators, Supervisors of Occupational Education Programs, and Regional Computer Personnel) also reviewed the ISSOE Student Reporting System and informational formats.

This group stressed that employers need an assessment of the student's (job applicant's) attitudes. This is as important as the skill competencies a student may possess.

They expressed a willingness to support the ISSOE Student Reporting System approach which includes Individual Program Planning for the students. Their preference was for the student "Record of Achievement" format, as it displays D.O.T. Job Titles and also relates ISSOE program major objectives to the individual D.O.T. Job Titles. The educators expressed a concern regarding paper overload in a reporting system. They also stressed that a guidance component should be included in the system.

Placement Coordinators and Regional Labor Department Representatives

Another group at the "Employers' Conference" was composed of student placement coordinators and New York State Regional Labor Department representatives. This group also preferred the ISSOE-SRS forms displaying D.O.T. and ISSOE program competencies on the individual reporting form (Record of Achievement).

The following suggestions were offered by this group regarding the ISSOE-SRS:

1. Before Placement Coordinators can legally release information on the forms, students must sign a release form.
2. Attendance records should be added to the SRS form.
3. Days, weeks, or contact hours of training the student has had should be included on the SRS form.
4. The form should include the date of completion of the program, in order to satisfy the need to know the relevancy of the training.
5. The form should indicate which training agency the student attended.

6. The form should include previous work experience.

7. The form should contain information on the student's attitudes--ability to accept criticism, ability to work cooperatively with others, understanding of the profit motive in business, and ability to understand, interpret and execute instructions (for example, the instructions in an automotive manual).

8. The form should report the speed at which the student can work, or the time it takes the student to complete particular tasks.

9. It should indicate whether the student owns the tools of the trade--this is especially important for auto mechanics.

10. It should include safety considerations.

11. There should be a separate sheet for each D.O.T. Job Title.

12. The form should indicate potential places of employment.

13. It should indicate where the student might go to obtain up-to-date employment information.

Participants also pointed out that it would be necessary to look into security procedures to prevent students' filling out their own forms.

Finally, participants discussed the possibility of schools sharing information with labor people, and suggested that a copy of the Individual Student's Record be kept at the BOCES or local school.

Comments from the General Session

Several valuable points were made at the General Session at the "Employers' Conference."

1. There was a great deal of similarity in recommendations across the groups. For example, the employability-skills question was raised in all groups; all groups discussed the need to report on the attitudes of students; all mentioned the problem of an overload of paperwork.

2. SRS forms would provide information about job applicants at entry level. Employers would use them as a guide, but would not regard them as the final word on the applicant. Obviously, employers would also talk with the individual. An applicant with a very good record might prove undesirable at interview. Nevertheless, employers look upon the Student Reporting System as a good guide for hiring at entry level.

3. ISSOE is trying to develop uniformity to benefit the student. The student should achieve the same level of competency for a given job regardless of where it is taught in New York State. If students transfer from school to school in a similar program, they should still accomplish uniform competencies.

4. Attendance and the proportion of attendance in the total program should be reported. In addition to giving a percentage attendance, such as "98% attendance in the program," reports should indicate the length of the program--whether it was a ten-week program or a twenty-week program, for example. This would let employers know not only the extent of the program but also the student's degree of commitment.

5. Some employers indicated that a single "satisfactory" rating could be sufficient for entry-level workers, but that when they are looking for employees to move up the ladder they would prefer a system with gradations.

6. It is obvious that, whatever system goes out in the field, there must be options to respond to local needs.

7. Information about the Student Reporting System should be disseminated on a local level using whatever mechanisms are available. For example, when the Industrial Management Council meets in Rochester, most of the personnel directors in the county attend; if ISSOE were to take advantage of this opportunity to explain the Student Reporting System, then personnel directors would recognize the SRS documents when they see them and know how much credibility to give them.

Student Accomplishments during the 1978-79 Field Test

Table 2 displays objectives attained by various student groups in the individual classes. This study was designed to show the relationship of performance by the various groups of students in classes. It does not provide a comparison among classes.

There was no significant difference in the number of objectives attained by students in the various categories in 24 of the 25 classes. In case number ten there was a significant difference between the number of objectives attained by the high achievers, the medium achievers and the low achievers.

The data collected suggested that the high achievers completed more of the difficult objectives than the students in the medium and low achievement groups.

TABLE 2

Mean Number of Objectives Attained By Various Student Categories

Class	Program	No of Students	1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj	Obj
1	Auto	22	37.25	38.25	36.33	38.16	37.0	36.0		37.36		36.66	37.62			
2	"	15	42.0	38.30	38.18								39.06			
3	"	19	19.20	16.6	14.4								16.57			
4	"	10	59.8	57.2	54.6								56.5			
5	"	15	123.0	123.0	123.0					123.0			123.0			
6	"	13	29.7	23.4	20.2								23.0			
7	"	13	82.0	81.0	77.5	73.0							79.38			
8	"	16	91.33	91.3	71.0					87.5			87.5			
9	"	14	19.0	17.83	11.2	13.83				15.71			15.71			
10	"	11	44.0	26.0	15.0	16.0				24.63			24.63			
11	"	4	48.0	40.3	39.0								42.0			
12	Off.	13	39.8	40.0		45.0							4.07			
13	"	15	36.2	33.6	29.3								33.9			
14	"	12	12.0	12.0	12.0								12.0			
15	"	20	46.5	44.93	43.75				45.25				45.25			
16	"	10	9.0	8.4	6.5								7.0			
17	"	16	32.4	30.7	30.2								31.35			
18	"	8	6.0	6.0	6.0								6.0			
19	"	19	25.85	25.36	25.0	25.0							25.52			
20	"	11	10.0	10.0									10.0			
21	"	14	45.0	45.0		45.0			45.0		45.0					
22	"	11	23.0	23.0					23.0				23.0			
23	"	11	24.75	27.25					25.54				25.54			
24	"	10	9.75	10.0	8.66	11.0	8.0			11.0		11.0	9.33			
25	"	17	25.66	23.75					25.93				25.93			

Student Categories

1. High Achiever
2. Medium Achiever
3. Low Achiever
4. Disadvantaged
5. Handicapped
6. Bilingual
7. Female
8. Male
9. Native American
10. Black
11. Caucasian
12. Oriental
13. Spanish Surname
14. Other

Recommendations

1. Expansion of the ISSOE Student Reporting System

   a. Assist LEAs in implementing the ISSOE-SRS. This assistance can range from implementing the SRS as a self-sufficient local system to relying on out-of-district support systems.

   b. Replication of SRS in other areas of occupational education. Research and developmental activities necessary to replicate the SRS in areas other than Auto Mechanics and Office Practice. This would include:

      1) validating appropriate D.O.T. Job Titles for selected programs and matching ISSOE major objectives (competencies) to these Job Titles;

      2) collecting data from teachers and processing this information to determine teacher utility; and

      3) other appropriate activities associated with replicating the system.

The ISSOE-SRS promotes uniformity in reporting student progress in CBVE and is directly related to real jobs. The common elements of the system provide for statewide uniformity and components can be added to meet local needs. Providing this uniformity with flexibility has been the central theme in developing the ISSOE-SRS.

In New York State and other states, occupational education administrators are searching for improved methods of reporting st dent progress systematically. The ISSOE-SRS has been developed with much consultation with a large steering committee of representatives from educators, employers and the Department of Labor. These practitioners along with those involved in the field-testing phase have contributed to a system that provides statewide uniformity with maximum flexibility.

State leadership is necessary to ensure that the ISSOE-SRS will remain responsive to local needs and still retain statewide uniformity. This will assist in improved utilization of resources by preventing the proliferation of independently developed student reporting systems.

2. ISSOE subsystem to evaluate effectiveness systematically. This recommendation is appropriate and a necessary future direction if ISSOE is to fulfill its purpose of improving the effectiveness of occupational education. It is recommended that a subsystem be added to ISSOE in order to provide the means for systematic evaluation of teacher effectiveness and program effectiveness.

With the introduction of ISSOE to school systems during the past four years, two issues have clearly emerged--one at the teacher level, the other at the administrator level. Teachers raise the question of why they should change their present instructional methods to those advanced by the ISSOE concept. Administrators ask how ISSOE helps the school and/or the school district.

The benefits of ISSOE to these audiences and others have been set forth in descriptive terms many times over. However, few benefits of ISSOE can yet be supported with hard data. The general answer to these questions can be succinctly stated as: (1) ISSOE leads to more effective instruction and (2) ISSOE leads to improvement in the effectiveness of occupational programs.

None of the current components of ISSOE functions to determine effectiveness in a systematic way. The aspects of ISSOE that have been implemented to date include curriculum development, which provides a process for ensuring the relevancy of occupational programs. Also included is an instructional development component to improve methods for satisfying the needs of students. The student-management component includes a process for planning student programs and reporting student progress. It does not include an evaluation mechanism per se.

Therefore, the need is clear. In order to be able to improve teacher effectiveness and program effectiveness, a system must be developed to determine degrees of effectiveness for comparative purposes. For only when effectiveness can be determined can estimates of improvement be judged.

3. The following four forms become the Model forms for reporting student progress in ISSOE occupational programs:

a. Form V--Student Competency Profile.

This is an interim reporting profile. It is used at the end of each reporting period to display a student's progress toward a particular D.O.T. Job.

b. Form V-A--Occupational Competency Profile.

This interim reporting profile is used at the end of each reporting period to display a student's progress toward a number of D.O.T. job titles. This is a summation of Form V and is used only when all competencies on Form V have been completed.

c. Form VI--Record of Achievement.

This end-of-program report summarizes on one form the accomplishments of a student. This can be used as an employability profile.

d. Form IV-A--Class Progress Chart.

This chart is produced at the end of each reporting period and displays the progress of every individual in the class. This chart has been previously identified as a student data collection form. This chart can serve a dual function of data collection and/or reporting class progress.

APPENDIX A

ISSOE STEERING COMMITTEE

ISSOE STEERING COMMITTEE

Douglas T. Adamson, Director
Division of Occ. Educ. Instr.
NYS Educ. Department
Albany, New York 12224

Douglas Adamson
ISSOE Regional Coordinator, Reg. 11
Schuyler-Chemung-Tioga BOCES
Elmira, New York 14903

Carl Benenati
Chief, Bur. of Trade
Technical & Service Educ.
NYS Education Dept.
Albany, New York 12210

Joseph Carr
Teacher, Automotive Mechanics
Lester B. Forman Area Educ. Ctr.
Monroe County BOCES #1
Fairport, New York 14450

Ann Cohn
Regional Planner, Region 11
Corning Community College
5th & Chemung Street
Corning, New York 14830

Peter Cooke, Associate
Div. of Occ. Educ. Instruction
NYS Educ. Dept.
Albany, New York 12230

James Decker
Director, Occ. Educ.
Lester B. Forman Area Educ. Ctr.
Monroe County BOCES #1
Fairport, New York 14450

Michael Divito
Curr. Super. & ISSOE Reg. Coord.
Region 10
Rochester City School District
410 Alexander St.
Rochester, New York 14607

William E. Drake, Professor
Agr. and Occu. Educ.
Dept. of Educ.
Cornell University
Ithaca, New York 14853

Gill Ferris
Guidance Counselor & Curr. Coord.
Steuben County BOCES
Coopers Career Center
Corning, New York 14830

Edgar Hollwedell
Dir. of Occ. Educ.
Rochester City School Dist.
410 Alexander St.
Rochester, New York 14607

Jean Kulakowski
Super. Health Occup.
Lakeside Occupational Center
Onondaga-Madison BOCES
Syracuse, New York 13209

James McElhatten
Dir. Occ. Educ.
Broome-E. Tioga Occ. Center
Upper Glenwood Road
P. O. Box 1450
Binghamton, New York 13905

Paul Mikus, Director
Central NY Regional Computer Ctr.
314 Lakeside Road
Syracuse, New York 13209

Joan Penrose
ISSOE Area Facilitator
New York Institute of Technology
Box 170 Wheatley Road
Old Westbury, New York 11586

Lee Peters, District Supt.
Cortland-Madison BOCES
Clinton Avenue Extension
Cortland, New York 13045

Donna Phillips
Dir. of Home Econ. Educ.
Rochester City Schools
410 Alexander St.
Rochester, New York 14607

Terry Reilly
ISSOE Reg. Coord. Reg. 9
Oswego-Onondaga BOCES
Box 688
Mexico, New York 13114

James F. Rosa
District Occupational Analyst
NYS Dept. of Labor
540 East Main St.
Rochester, New York 14604

Donna Santa, Director
Occupational Education
Westchester BOCES #2
65 Grasslands Rd.
Valhalla, New York

Rudolph Schneider
Director of Occu. Educ.
Steuben County BOCES
6666 Babcock Hollow Road
R. D. #4
Bath, New York 14810

Richard Smith, Principal
Whitney Point Central School
Whitney Point, New York 13862

Wayne Trigg
ISS Consultant
NY City Board of Educ.
Metropolitan Educ. Lab.
110 Livingston St.
Brooklyn, New York 11201

Frank Wolff
Asst. Superintendent
Nassau County BOCES
Valentine Road & The Plain Rd.
Westbury, New York 11590

Gerry Zinczyn
Placement Coordinator
John Marshall High School
Rochester, New York 14626

Pellegrino (Duke) Zuzio
ISSOE Regional Coordinator,
Region 1E
Suffolk BOCES #2
201 Sunrise Highway
Patchoque, New York 11772

James A. Dunn, Director
Institute for Occupational Educ.
Dept. of Education
Cornell University
Ithaca, New York 14853

Vernon Beuke
Research Associate
Institute for Occupational Educ.
Dept. of Education
Cornell University
Ithaca, New York 14853

Alan Edsall
Sr. Research Associate
Institute for Occupational Educ.
Dept. of Education
Cornell University
Ithaca, New York 14853

APPENDIX B

RECOMMENDED STUDENT REPORTING FORMS

Record of Achievement
Automotive and Office

Class Progress Chart
Automotive and Office

RECORD OF ACHIEVEMENT

This is to certify that

has completed a course(s) in

Automotive mechanics 170302

PERFORMANCE	S.-S. Station Attendant (915.477-010)	Lubrication Servicer (915.467-010)	Tire Repairer (915.361-010)	Muffler Installer (807.361-010)	Service Station Attendant (915.467-010)	Brake Mechanic (620.281-026)	Front-end Mechanic (620.281-026)	Tune-up Mechanic (620.261-046)	Get-ready Mechanic (806.381-026)	Automotive Mechanic (620.261-010)
Outstanding										
Skilled										
Satisfactory										
Satisfactory with Supervision										

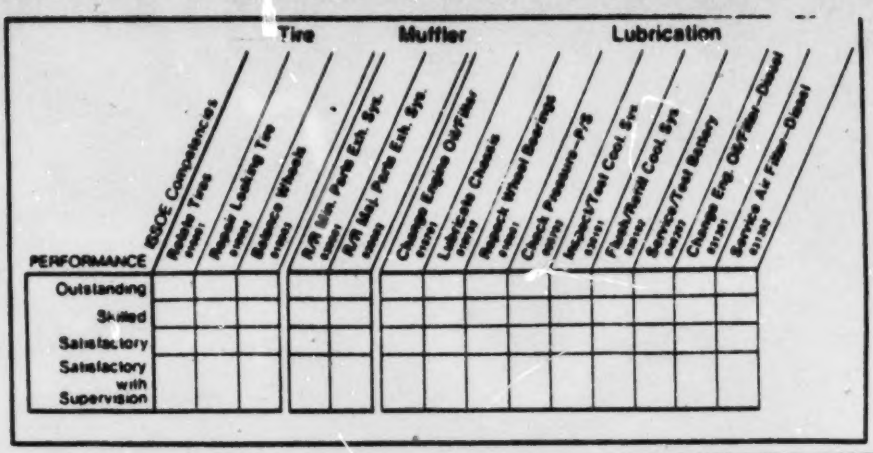
Instructor

Administrator

67

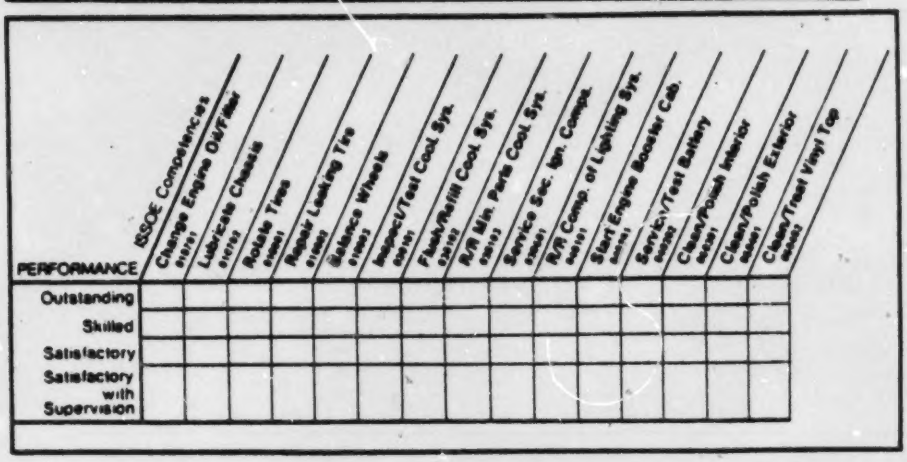
Tire Servicer
Muffler Installer
Lubrication Servicer

915.684-010
807.664-010
915.687-018

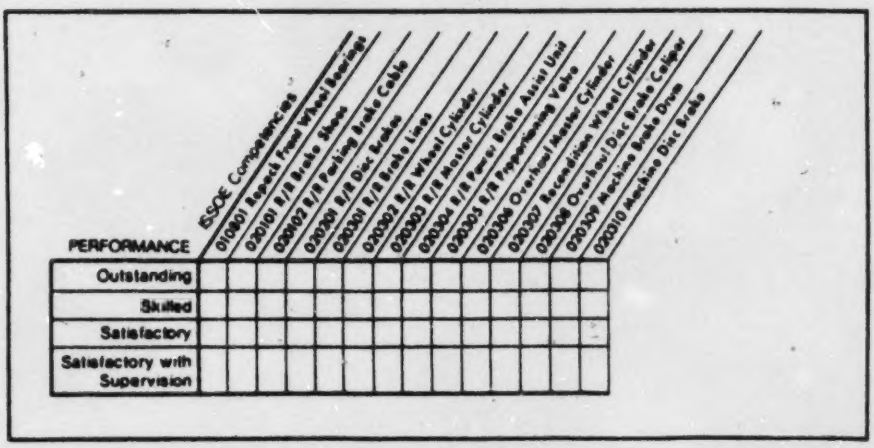


Service Station Attendant

915.477-010
915.467-010

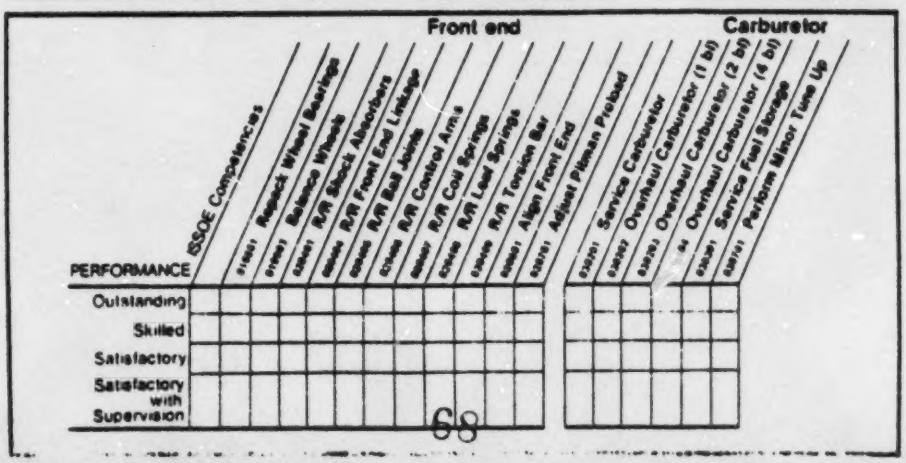


Brake Mechanic
602.281-026



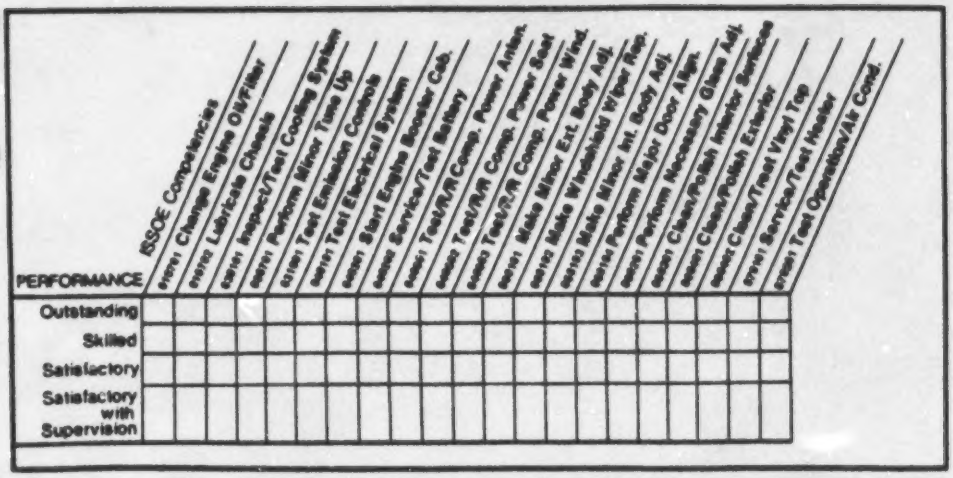
Front End Mechanic
Carburetor Mechanic

620.281-038
620.281-034

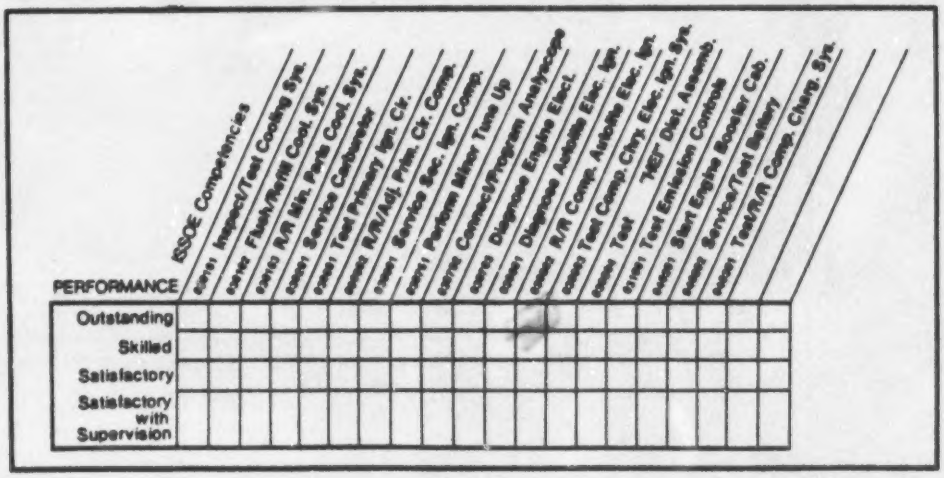


68

New Car Get-Ready Mechanic 806.361-026



Tune Up Mechanic 620.281-066



69

RECORD OF ACHIEVEMENT

This is to certify that

has completed a course(s) in

Office training 140303

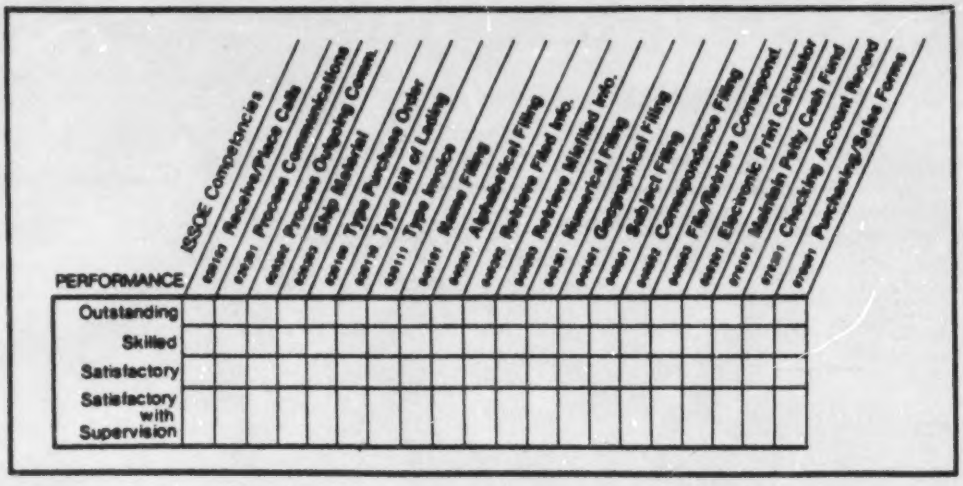
PERFORMANCE	Receptionist 237.367-038	File Clerk I 206.362-010	Stock Clerk 214.137-038	Clerk-General 209.567-010	Clerk Typist 203.362-010
Outstanding					
Skilled					
Satisfactory					
Satisfactory with Supervision					

INSTRUCTOR

ADMINISTRATOR

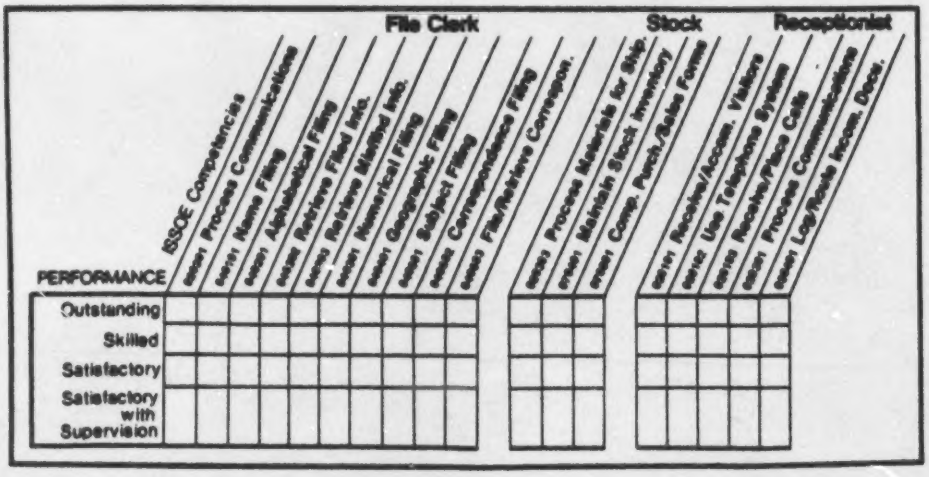
70

Clerk, General
209.562-010



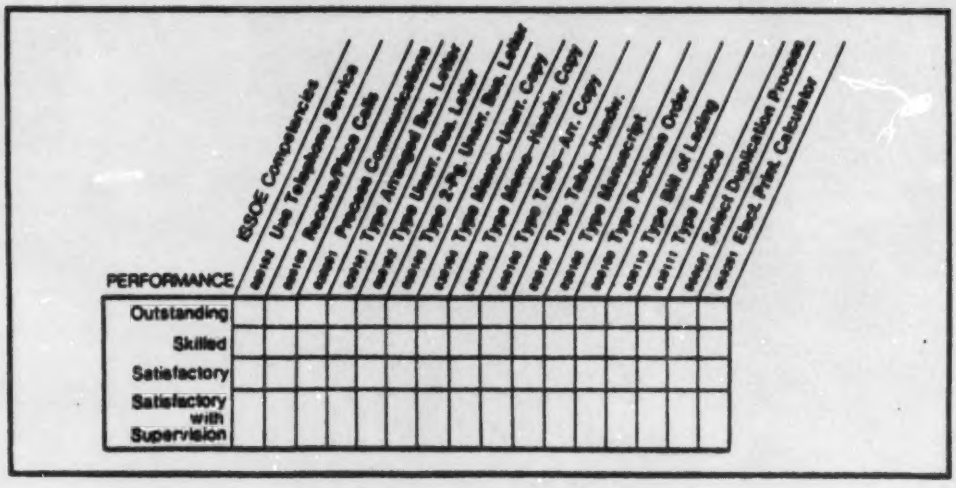
File Clerk I
Stock Clerk
Receptionist

206.362-0101
222.387-058
237.367-038



71

Clerk-Typist (clerical) 203.362-010



72

ISSOE

OFFICE TRAINING

PROGRAM - 140303

CLASS PROGRESS CHART

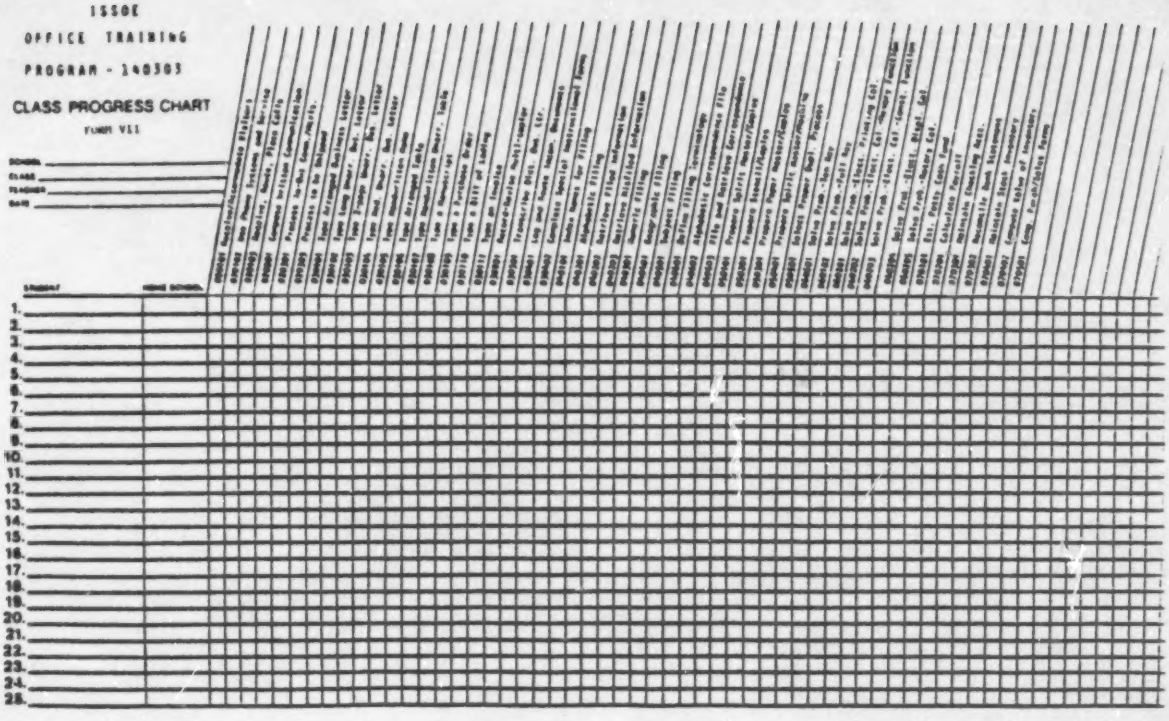
FUNIT VII

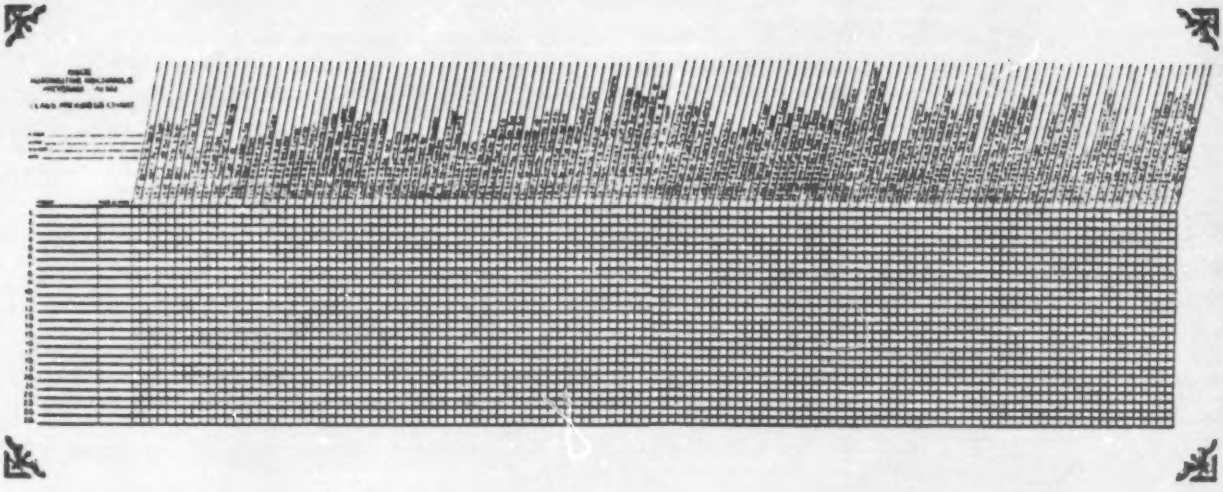
SCHOOL _____

CLASS _____

TEACHER _____

DATE _____


Operate Typewriter
Type Business Letter
Type Personal Letter
Type Simple Tabulation
Type Manuscript
Type Rough Draft
Type Business Memo
Type Business Report
Type Simple Outline
Type Footnotes
Type Bibliography
Type Simple Table
Type Complex Table
Type Carbon Copies
Type Interoffice Memo
Type Postcard
Type Envelopes
Type Labels
Type Form Letters
Type Stencils
Type Ditto Masters
Type Telegrams
Type Minutes
Type Agenda
Type Resume
Type Purchase Order
Type Invoice
Type Itinerary
Type Speech
Type Manuscript
Type Rough Draft
Type Revised Draft
Type Final Draft
Type Proofread Copy
Type Revised Copy
Type Final Copy
Type Revised Copy
Type Final Copy
Type Revised Copy
Type Final



74

APPENDIX C

ISSOE COMPETENCIES MATCHED TO
D.O.T. JOB TITLES - AUTOMOTIVE

75

DOT Codes and Titles and ISSOE Competencies

915.684-010 Tire Repairer or Servicer

Repairs damaged tires of automobiles, buses, trucks, and other automotive vehicles: Raises vehicle, using hydraulic jack, and unbolts wheel, using lug wrench. Removes wheel from vehicle by hand or, when repairing giant tires of heavy equipment, by use of power hoist. Locates puncture in tubeless tire by visual inspection or by immersing inflated tire in water bath and observing air bubbles emerging from puncture. Seals puncture in tubeless tire by inserting adhesive material and expanding rubber plug into puncture, using handtools. Separates tubed tire from wheel, using rubber mallet and metal bar or mechanical tire changer. Removes inner tube from tire and inspects tire casing for defects, such as holes and tears. Glues boot (tire patch) over rupture in tire casing, using rubber cement. Inflates inner tube and immerses it in water to locate leak. Buffs defective area of inner tube, using scraper, and patches tube with adhesive rubber patch or seals rubber patch to tube, using hot vulcanizing plate. Reassembles tire onto wheel, and places wheel on balancing machine to determine counterweights required to balance wheel. Hammers required counterweights onto rim of wheel. Cleans sides of white wall tires and remounts wheel onto vehicle. Responds to emergency calls to make repairs or replacements of damaged tires at customer's home or on road. May be designated according to specialty as Giant-Tire Repairer (auto. ser.); Tire Changer (auto. ser.); Tire Changer, Aircraft (air trans.); Tire Changer, Road Service (auto. ser.).

ISSOE Competencies

010901 Rotate Tires
010902 Repair a Leaking Tire
010903 Balance Wheels

DOT Codes and Titles and ISSOE Competencies

915.687-018 Lubrication Servicer

Lubricates moving parts of automotive vehicles, such as automobiles, buses, and trucks: Injects grease into units, such as springs, universal joints, and steering knuckles, using hand or compressed-air powered grease gun. Inspects fluid level of steering gear, power steering reservoir, transmission, differential, rear axle housing, and shackles. Checks air pressure of tires. Lubricates moving parts with specified lubricants. Drains oil from crankcase and refills crankcase with required amount of oil. Sprays leaf springs with lubricant, using spray gun. Adds water to radiator and battery. Replaces oil and air filters. May sell lubrication and safety inspection services and maintain related records on regular customers, following up periodically with telephone, mail, or personal reminders.

ISSOE Competencies

010701	Change Engine Oil & Filter	030102	Flush & Refill Cooling Sys.
010702	Lubricate Chassis	040202	Service & Test Battery
010801	Repack Front Wheel Bearings	031301	Change Oil & Filter-Diesel
020702	Check Pressure - Power Steer.	031302	Service Air Filter-Diesel
030101	Inspect & Test Cocling System		

DOT Codes and Titles and ISSOE Competencies

807.664-010 Muffler Installer

Replaces defective mufflers and pipes on automobiles, buses, trucks, and other automotive vehicles according to factory or customer specifications, using handtools and power tools: Removes defective muffler, using hacksaw, wrenches, airpowered tools, or acetylene torch. Selects replacement muffler according to automotive vehicle model and customer's preference. Bolts or tack welds new muffler in place. Bends and shapes tailpipe sections according to customer specifications, using pipe-bending machine. Welds tailpipe sections to muffler or exhaust pipe, using arc welding equipment. Aligns muffler and tailpipe within frame and bolts hangers to frame to secure muffler.

ISSOE Competencies

030901 R/R Minor Parts of Exhaust 030902 R/R Major parts of Exhaust

Select Welding Competencies - Using Acetylene Torch - Brazing, Welding & Cutting.

DOT Codes and Titles and ISSOE Competencies

915.477-010 Automotive Self-Service Station Attendant

Sells fuel, lubricants, and accessories, at self-service station to operators of automobiles, buses, trucks, and other automotive vehicles: Allows customer to fill fuel tank or automotive vehicle with fuel, such as gasoline or diesel fuel to desired level. Checks level of oil in crankcase and amount of water in radiator, and adds oil and water as requested by customer. Collects cash from customer for purchases and makes change or charges purchases, using customer-charge plate. Prepares daily report of fuel, oil, and accessories sold. May lubricate vehicle, change motor oil, and replace accessories, such as oil filter, air filter, windshield wiper blades, and fan belt. May install antifreeze, change spark plugs, make minor brake adjustments, and repair or replace tires. May fill fuel tanks for customers. May service fishing boats and pleasure craft and be designated MARINE-SERVICE STATION ATTENDANT (water trans.).

ISSOE Competencies

010701	Change Engine Oil & Filter	010902	Repair a Leaking Tire
010702	Lubricate Chassis	030101	Inspect & Test Cooling System
010901	Rotate Tires		

Select Office Training Competencies - Cash Handling

DOT Codes and Titles and ISSOE Competencies

915.467-010 Automotive Service Station Attendant

Services automobiles, buses, trucks, and other automotive vehicles with fuel, lubricants, and accessories: Fills fuel tank of vehicles with gasoline or diesel fuel to level specified by customer. Observes level of oil in crankcase and amount of water in radiator, and adds required amounts of oil and water. Adds necessary amount of water to battery, and washes windshield of vehicle. Lubricates vehicle and changes motor oil LUBRICATION SERVICER (auto. ser.). Replaces accessories, such as oil filter, air filter, windshield wiper blades, and fan belt. Installs antifreeze and changes spark plugs. Repairs or replaces tires TIRE REPAIRER (auto. ser.). Replaces lights and washes and waxes vehicle. Collects cash from customer for purchases and makes change or charges purchases, using customer-charge plate. May adjust brakes BRAKE ADJUSTER (auto. serv.). May sell batteries and automobile accessories usually found in service stations. May assist in arranging displays, taking inventories, and making daily reports.

ISSOE Competencies

010701	Change Engine Oil & Filter	030601	Service Sec. Ign. Comps.
010702	Lubricate Chassis	040101	R/R Comp. of Lighting Sys.
010901	Rotate Tires	040201	Start Engine Booster Cab.
010902	Repair a Leaking Tire	040202	Service & Test Battery
010903	Balance Wheels	060301	Clean/Polish Interior Surfaces
030101	Inspect & Test Cooling System	060401	Clean/Polish Exterior
030102	Flush & Refill Cooling System	060402	Clean/Treat Vinyl Top
030103	R/R Minor Parts Cool. Sys.		

Select Office Training Competencies - Cash Handling, Inventory and Displays

DOT Codes and Titles and ISSOE Competencies

620.281-026 Brake Mechanic

Repairs and overhauls brake systems in automobiles, buses, trucks, and other automotive vehicles: Pushes handle of hydraulic jack or pushes hoist control to raise vehicle axle. Removes wheels, using wrenches, wheel puller, and sledge hammer. Replaces defective brakeshoe units or attaches new linings to brakeshoes. Measures brake drum to determine amount of wear, using brake drum micrometer. Inserts vacuum gage into power-brake cylinder, starts engine and reads gage to detect brake-line leaks. Repairs or replaces leaky brake cylinders. Repairs or replaces defective air compressor in airbrake systems. Replaces wheel on axle and adjusts drumshoe clearance, using wrench. Fills master brake cylinder with brake fluid, pumps brake pedal, or uses pressure tank, and opens valves on hydraulic brake system to bleed air from brake lines. Closes valves and refits master brake cylinder. May be designated according to speciality as Brake Repairer, Air (auto. serv.); Brake Repairer, Hydraulic (auto. ser.); Brake Repairer, Bus (auto. ser.).

ISSOE Competencies

010801	Repack Front Wheel Bearings	020304	R/R Power Brake Assist Unit
020101	R/R Brake Shoes	020305	R/R Proportioning Valve
020102	R/R Parking Brake Cable	020306	Overhaul a Master Cylinder
020201	R/R Disc Brake	020307	Recondition Wheel Cylinder
020301	R/R Brake Lines	020308	Overhaul Disc. Brake Caliper
020302	R/R Wheel Cylinder	020309	Machine Brake Drum
020303	R/R Master Cylinder	020310	Machine a Disc Brake Rotor

DOT Codes and Titles and ISSOE Competencies

620.281-038 Front-End Mechanic

Aligns wheels, axles, frames, torsion bars, and steering mechanisms of automotive vehicles, such as automobiles, buses, and trucks: Drives automotive vehicle onto wheel alignment rack and tests vehicle or faulty wheel alignment, bent axle, worn ball joints, and bent steering rods, using alignment-testing machine. Straightens axle and steering rods and adjust shims, tie rods, and joining pins to align wheels, or installs new parts, using handtools. Places wheel on balancing machine to determine where counterweights must be added to balance wheel. Hammers counterweights onto rim of wheel. Installs shock absorbers. Straightens frame, using hydraulic jack, chassis aligner, and acetylene torch.

ISSOE Competencies

010801	Repack Front Wheel Bearings	020406	R/R Control Arms
010903	Balance Wheels	020407	R/R Coil Springs
020401	R/R Shock Absorbers	020408	R/R Leaf Spring
020404	R/R Front End Linkage	020409	R/R Torsion Bar
020405	R/R Ball Joints	020601	Align Front End
		020701	Adjust Pitman Arm Preload

DOT Codes and Titles and ISSOE Competencies

620.281-066 Tune-Up Mechanic

Tunes automotive vehicle engines to insure efficient operation: Removes spark plugs, using socket wrench, and tests them, using sparkplug tester. Cleans electrodes in sandblasting machine, sets spark gap with feeler gage, and replaces or installs new plugs. Inspects distributor breaker points for wear and pits, using feeler gage, and replaces or resets points. Observes ignition timing, using timing light, and adjusts timing using handtools. Adjusts carburetor needle setting, using handtools, and verifies adjustment, using instruments, such as fuel analyzer, vacuum gage oscilloscope, and tachometer. Sets valve tappets, using feeler gage or dial indicator. Replaces defective coils, condensers, and electrical connectors. Removes and cleans carburetor and fuel pump. Examines battery and connections and electrical charging and starting circuit. Adjusts, and repairs fan belt, and fuel and water pumps. May tune engine while vehicle runs on rollers connected to dynamometer and be designated as Dynamometer Tuner.

ISSOE Competencies

030101	Inspect & Test Cooling System	030801	Diagnose Autolite Electronic Ignition Problems
030102	Drain, Flush & Refill Cooling System	030802	R/R comp. Au.-Lt. Elect. Ign.
030103	R & R Minor Parts	030803	Test Comp. Chry. Elec. Ign. Sys.
030201	Service Carburetor	030804	Test GM "HEI" Dist. Assemb.
030501	Test Primary Ignition Circuit	031001	Test Emission Controls
030502	Replace and/or Adjust Pri. Cir. Comp.	040201	Start Engine Booster Cab.
030601	Service Ignition Secon. Comp.	040202	Service & Test Battery
030701	Perform Minor Tune Up	040301	Test, R & R Comp. Charg. Sys.
030702	Connect & Program Analyscope		
030703	Diagnose an Engine		

DOT Codes and Titles and ISSOE Competencies

806.361-026 New Car Get-Ready Mechanic

Inspects and services new automobiles on delivery to dealer or customer and makes minor repairs or adjustments to place vehicle in salable condition, using handtools, portable power tools, and specification sheets: Inspects vehicle for obvious damage and missing major components. Records discrepancies and signs acceptance slip for each vehicle delivered. Inspects vehicle for loose or misaligned trim, doors, hardware, and other items, and corrects defects, using handtools. Starts engine and drives automobile to test steering, brakes, transmission, and engine operation. Activates power equipment, such as electric windows, seats, radio, horn, lights and directional signals to insure specified operating standards. Washes car and vacuums interior. Inspects surfaces to detect minor chips or scratches in paint and touches up imperfections using brush applicator and factory-supplied matching paint. Installs optional equipment specified by customer or dealer, such as outside mirrors, rugs and seat covers, using handtools. Pours antifreeze into radiator according to seasonal requirements. Polishes car to remove preservative coating and road film accumulated during transit. May spray undercoating material on vehicle, using spray gun. May tune engine, using mechanics' tools and test equipment. May install or repair major mechanical, hydraulic, or electro-units, and power brakes, using mechanics' handtools.

ISSOE Competencies

010701	Change Engine Oil & Filter	060101	Make Minor Ext. Body Adj.
010702	Lubricate Chassis	060102	Make Windshield Wiper Repairs
030101	Inspect/ Test Cooling System	060103	Make Minor Interior Body Adj.
030701	Perform Minor Tune Up	060104	Perform Door Alignment
031001	Test Emission Controls	060201	Perform Necessary Glass Adj.
040101	Test Electrical System	060301	Clean/Polish Interior Surfaces
040201	Start Engine Booster Cab.	060401	Clean/Polish Exterior
040202	Service and Test Battery	060402	Clean/Treat Vinyl Top
040601	Test, R/R Comp. Power Antenna	070101	Service and Test Heater
040602	Test, R/R Comp. Power Seat	070201	Test Operation/Air Conditioner
040603	Test, R/R Comp. Power Wind.		

APPENDIX D

ISSOE COMPETENCIES MATCHED TO
D.O.T. JOB TITLES - OFFICE

DOT Codes and Titles and ISSOE Competencies

237.367-038 Receptionist

Receives callers at establishment, determines nature of business, and directs callers to destination: Obtains caller's name and arranges for appointment with person called upon. Directs caller to destination and records name, time of call, nature of business, and person called upon. May issue visitor's pass when required. May make future appointments and answer inquiries [INFORMATION CLERK (clerical)]. May perform variety of clerical duties [ADMINISTRATIVE CLERK (clerical)] and other duties pertinent to type of establishment. May collect and distribute mail and messages. May receive patients in office of DENTIST (medical ser.); PHYSICIAN (medical ser.), or other health service, and be designated as OUTPATIENT RECEPTIONIST (medical ser.) or RECEPTIONIST, DOCTOR'S OFFICE (medical serv.).

ISSOE Competencies

020101	Receive and Accommodate Visitors	020301	Process Communications
020102	Use Telephone System	030401	Log and Route Incoming Documents
020103	Receive and Place Calls		

222.387-058 Stock Clerk

Receives, stores, and issues equipment, material, supplies, merchandise, foodstuffs, or tools, and compiles stock records in stockroom, warehouse, or storage yard: Counts, sorts, or weighs incoming articles to verify receipt of items on requisition or invoices. Examines stock to verify conformance to specifications. Stores articles in bins, on floor, or on shelves, according to identifying information, such as style, size or type of material. Fills orders or issues supplies from stock. Prepares periodic, special, or perpetual inventory of stock. Requisitions articles to fill incoming orders. Compiles reports on use of stock handling equipment, adjustments of inventory counts and stock records, spoilage of or damage to stock, locations changes, and refusal on shipments. May mark identifying codes, figures, or letters on articles. May distribute stock among production workers, keeping records of material issued. May make adjustments or repairs to articles carried in stock. May determine methods of storage, identification, and stock location, considering temperature, humidity, height and weight limits, turnover, floor loading capacities, and required space. May cut stock to size to fill order. May move or transport material or supplies to other departments, using hand or industrial truck. May be designated according to material, equipment, or product stored.

ISSOE Competencies

020303	Process Materials for Shipping	070401	Maintain Stock Inventory
040201	Alphabetic Filing	070501	Comp. Purch./Sales Forms

DOT Codes and Titles and ISSOE Competencies

206.362-010 File Clerk I

Files correspondence, cards, invoices, receipts and other records in alphabetical or numerical order, or according to subject matter, phonetic spelling, or other system: Reads incoming material and sorts according to file system. Places material in file cabinet, drawers, boxes, or in special filing cases. Locates and removes material from files when requested. Keeps records of material removed, stamps material received, traces missing file folders, and types indexing information on folders. May enter data on records. May be designated according to subject matter filed as CHANGE-OF-ADDRESS CLERK (clerical), SUBSCRIPTION CLERK (clerical); or according to material filed as ADDRESSOGRAPH-PLATE-FILE CLERK (clerical); FILE CLERK, CORRESPONDENCE (clerical); FILE CLERK, DRAWINGS (clerical); FILE CLERK, STENCILS (clerical). May file according to phonetic spelling and be designated FILE CLERK, SOUNDEX SYSTEM (clerical).

ISSOE Competencies

020301	Process Communications	040401	Geographic Filing
040101	Name Filing	040501	Subject Filing
040201	Alphabetical Filing	040602	Correspondence Filing
040202	Retrieve Filed Information	040603	File and Retrieve Correspondence
040203	Retrieve Misfiled information		
040301	Numerical Filing		

209.562-010 Clerk, General

Performs any combination of following and similar clerical tasks requiring limited knowledge of systems or procedures: Writes or types bills, statements, receipts, checks, or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with typewriter or addressograph machine. Stuffs envelopes by hand or with envelope stuffing machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distributes mail. Stamps or numbers forms by hand or machine. Copies documents, using office duplicating equipment.

ISSOE Competencies

020103	Receive and Place Calls	040203	Retrieve Misfiled Information
020301	Process Communications	040301	Numerical Filing
020302	Process Outgoing communications	040401	Geographical Filing
		040501	Subject Filing
020303	Ship Material	040602	Correspondence Filing
030109	Type Purchase Order	040603	File and Retrieve Correspondence
030110	Type Bill of Lading	060201	Electronic Print Calculator
030111	Type Invoice	070101	Maintain Petty Cash Fund
040101	Name Filing	070301	Checking Account Record
040201	Alphabetical Filing	070501	Purchasing and Sales Forms
040202	Retrieve Filed Information		

DOT Codes and Titles and ISSOE Competencies

203.362-010 Clerk-Typist (clerical)

Compiles data and operates typewriter in performance of routine clerical duties to maintain business records and reports: Types reports, business correspondence, application forms, shipping tickets, and other matter. Files records and reports, posts information to records, sorts and distributes mail, answers telephone, and performs similar duties. May compute amounts, using adding or calculating machine. May be designated according to records typed as TRUST-REMITTANCE CLERK (finan. inst.). May type on or from specialized forms and be designated GUEST-HISTORY CLERK (hotel & Rest.); SECURITY-INDEX CLERK (finan. inst.); STORAGE-RECEIPT POSTER (clerical). May compile reports and type prescription data on labels in hospital pharmacy and be designated DISPENSARY CLERK (medical ser.). Additional titles: COLLECTION-CARD CLERK (clerical); MOTOR-POOL CLERK (clerical); ORDER CLERK (Light, heat and power); POLICY-ISSUE CLERK (insurance); REMITTANCE-ACCOUNT CLERK (finan. inst.) VERIFICATION-AND-PROXY CLERK (finan. inst.).

ISSOE Competencies

020102	Use Telephone Service	030105	Type Memo - Handw. Copy
020103	Receive/Place Calls	030106	Type a Table - Arr. Copy
020301	Process Communications	030107	Type a Table - Handwritten
030101	Type Arranged Business Letter	030108	Type a Manuscript
		030109	Type a Purchase Order
030102	Type Unarr. Business Letter	030110	Type a Bill of Lading
030103	Type 2-Page Unarr. Business Letter	030111	Type an Invoice
		050501	Select Duplication Process
030104	Type Memo - Unarr. Copy	060201	Electronic Print. Calculator

APPENDIX E

ADMINISTRATORS' ORIENTATION MEETING AGENDA

TEACHERS' NEEDS ASSESSMENT MEETING AGENDA

TEACHERS' ORIENTATION MEETING AGENDA

ISSOE

Guide

Administrators Orientation Meeting
to the Student Reporting System

Introduction - ISSOE Student Reporting System - Field Test Phase

A. Field Test Sites

Rochester City Schools - Test Site Region 10
Steuben County BOCES - Test Site Region 11
Onon.-Madison BOCES - Test Site Region 9

B. Beneficiary --------- STUDENT

Theme - Improvement of Instruction and Reporting Accomplishments

C. Guided by ISSOE Steering Committee at CIOE.

A Steering Committee for the ISSOE effort at CIOE was formed to provide a broad base for input and direction in developing a Student Reporting System for ISSOE.

The committee is composed of representatives of Local Educational Agencies (Occupational Teachers, Guidance personnel, Administrators), N. Y. State Education Department, N. Y. Department of Labor, Regional Planners, ISSOE Regional Coordinators and others as listed in the Appendix.

1. Progress

a. 1977-78 Committee assisted in the development of a Student Reporting System for ISSOE. Report summarized as part of 1977-78 final report. (ISSOE Final Report - CIOE - September 1978)

b. Committee met January 1979 to review progress and provide guidance for field testing the SRS during Spring 1979.

c. Recognize committee members at meeting.

D. Some Parameters for SRS:

1. Local Utility
2. Statewide Application
3. Display Student Progress in CBOE Program
4. Display Student Progress - Utility by Employment Community
   - Utility by Educational Community
5. Promoting individualization in Occupational Education Programs
6. Simplicity

E. Design Theme - Take the best of all and utilize what is and develop new, if appropriate.

1. New - Matching ISSOE Program Competencies to DOT Job Titles.

   a. ISSOE Competencies (Major Objectives) Broad Base - relate to jobs instead of individual skills.

      - Approximately 120 for Auto and 60 for Office Training.
      - This makes for a manageable system.

2. Old - Many Centers had Employability Profiles.

   a. Those were reviewed.
   b. Wanted a more concise profile.

F. SRS Needs

1. A CBOE Reporting System that can respond to the needs of various groups - Students, Teachers, Employers, Administrators, Guidance, Parents.
2. System designed to provide local reports need first.
3. When the system meets local needs, then information to meet SED reporting needs can be supplied.

G. The System

1. Designed at CIOE with many inputs

   a. Teachers especially
   b. ISSOE Steering Committee Members
   c. National Searches - (Many locals in N. Y. are as advanced as others in the Nation)
   d. This statewide approach appears to be ahead of other states.

2. Process

   a. Teachers provide data in Form I.
   b. Will provide a level of attainment for each student per ISSOE competency (Major Objective) completed.
   c. Level of performance

      W Satisfactory with Supervision
      X Satisfactory Performance
      Y Skilled Performance
      Z Outstanding Performance

   d. Teachers mail Form I to CIOE
   e. Data transferred from Form I at CIOE to

      1) Master Form - Class Progress Chart
      2) Appropriate Individual Progress Records - Form E
      3) Form F when a Form E has been completed for a particular DOT Job.

   f. Completed Forms I, E and F mailed to teacher. Teacher will distribute students' copies.
   g. Sample forms sent to Guidance Department and Appropriate administrators.
   h. Repeat a - f at each subsequent reporting period.
   i. Only one reporting period for this field test year.

H. Research Purposes

1. Test SRS system developed for utility - priority this year Teachers and Students.

   a. Teachers and others will have documents in hand to critique and respond to. Will stimulate ideas of needs and also used to determine if needs are met.

2. Determine feasibility of clustering ISSOE Program competencies to DOT Job Titles for reporting individual student progress in Occupational Education programs.

I. Greatest difference from other CBVE reporting systems -

Reporting out competencies as attained toward specific occupational goals, i.e. DOT Jobs.

J. Advancement of System - (new)

Matching of ISSOE Program Competencies to specific DOT Jobs. This provides a manageable system.

K. For next year - what are your needs? (Administrators)

L. Discussion of concerns.

ISSOE

Guide

Teachers' Introduction

Needs Assessment

What is a typical ISSOE program?

A well organized program where students are learning competencies related to employment in the world of work. This is what has happened in well organized programs before ISSOE, but it has been difficult to inform employers what the student can do with just a certificate or diploma.

Some Observations regarding ISSOE Programs:

Programs:

1. Organized using ISSOE outline and formats.
2. Definite objectives (major objectives) have been selected for students to learn in the program (Course of study uses ISSOE organizational pattern).
3. Students informed regarding expectations and how they will be assessed regarding progress.
4. Increased use of individual instruction and work stations.
5. Each student performs task before he/she can receive credit for the task.
6. Emphasis on small group and individual instruction.
7. Reliance on peer instruction and reinforcement.
8. Independent study area with learning packets and other instructional apparatus.
9. Students requesting instructors to evaluate their performance on specific competencies (Major Objectives) when they feel that they are ready to successfully meet the performance standards.
10. Customer work scheduled as needed for instruction.
11. Students aware of the ISSOE system as it works in the program.

- ISSOE tasks (Main Objective) Sheets with CRM's available for all students.
- Students know before hand what criteria have to be met to pass objective.
- ISSOE sheets become part of student's notebook.
- Student can progress at own rate.
- Student has to perform individual tasks.
- Students become very aware of their individual progress.

Evaluation:

1. Appears to be most difficult because of class size.
2. Generally continuing paper and pencil testing procedures to determine progress of cognitive work.
3. Students requesting evaluation on performance of major objectives (tasks).
   (Slow to start - then overwhelming - then teacher develops a workable system).
4. Teacher has two reporting systems
   a. Progress Chart
   b. Connecting this to report card grades (same as always).

Problems:

1.	Abilities	- Not new
2.	Large class size	- Not new
3.	Not enough money	- Not new
4.	Assessing for grades	- Not new
5.	Individualizing instruction	- Not new

The greatest concern is insuring that each student has been properly evaluated regarding his/her performance of each major objective (tasks or competency) as it is completed.

At present the teacher determines grades for students, marks them on report cards and other forms each marking period and uses them to determine pass or fail at the end of the year.

ISSOE Student Reporting System is interested in reporting students' competencies in a manner that has greater utility for students, teachers, administrators, guidance, parents, employers, etc.

How can you use information from the SRS? What are your needs from the SRS?

Potential Needs from SRS for ISSOE

Show individual progress in program.
Display class progress.
Plan instructional strategies - especially recycle.
Determine needed changes in curriculum.
Determine and regulate budget.
Determine equipment and instructional needs.
Determine competencies of transfer students.
Pre-assess student competencies.
Assessment of instruction.
Assist in working with handicapped students.
Coordinate student work with other teachers.
Coordinate course work with other teachers.
Assist in working with cooperative coordinator.
Assist in conferences with parents.
Assist in conferences with students.
Assist in conferences with guidance counselors.
Assist in conferences with administration.
Assist in working with advisory committee.
Assist in developing working relations with employers.
Assist in facilitating student follow-up.
Assist in relating program to community labor needs.
Assist in preparing annual report.
Assist in obtaining program approval.
Assist in meeting and conferring with visitors.

ISSOE

Guide

Teachers' Orientation and

Training Meeting

A. Review ISSOE Developments

1. Curriculum
2. Employer validation
3. V-Tecs
4. SRS - Request your participation in field testing the SRS System.

B. Student Reporting System

1. Developed 1977-78 - ISSOE Steering Committee.
2. Updated Fall 1978 and ready for testing.
3. Three test sites - Regions 9, 10 and 11.
4. Two - five teachers per region submit class data.
5. Need data regarding individual student accomplishment of ISSOE objectives.

C. Process

1. Provide data for one class.
   a. Individual student performance in attaining ISSOE program objectives.
   b. Identify performance level with code:

      W - Satisfactory with Supervision

      X - Satisfactory Performance

      Y - Skilled Performance

      Z - Outstanding Performance

   c. Use Form I to provide data.
2. Mail Form I to CIOE.

3. CIOE process data and return SRS output Form E, F and I.

   a. Form E - ISSOE Student Competency Profile for each appropriate DOT Job.

   b. Form F - Occupational Preparation Profile as appropriate.

   c. Form I - Class Progress Chart.

4. Hand out Forms E and F to individual students in class and display Class Progress Chart - Form I.

5. Analyze value of Forms E, F and I.

6. Meet with CIOE team during May to critique process and products.

APPENDIX F

MINUTES OF EMPLOYERS' CONFERENCE

ISSOE EMPLOYERS CONFERENCE

Minutes of Meeting

Sponsored by

Cornell Institute for Occupational Education
Department of Education
College of Agriculture and Life Sciences
Cornell University
Ithaca, New York

August 24, 1979

I. OPENING REMARKS

Professor James Dunn of the Cornell Institute for Occupational Education opened the conference at 9:45 a.m. with brief welcoming remarks and the introduction of guests, ISSOE coordinators from throughout the State, and the members of the staff of the Institute in attendance.

The workings of the Institute and its interests were described by Professor Joe Bail, Chair, Department of Education at Cornell, in his welcoming address. He stressed the importance of the work going forward in the ISSOE system. He also noted that the system was still in its developmental stages. Stating that further development and the effective implementation of the system depend on the comments and reactions of all interested parties, he asked for frank and open suggestions for improvement of ISSOE and its various materials. ISSOE's concentration on employers and potential employees makes it of central concern to all involved in occupational education.

Professor Dunn then introduced Mr. Peter Cooke, Associate, Division of Occupational Education Instruction of the State Education Department. Stressing the State's interest in and support of the ISSOE effort, Mr. Cooke sketched the goals and purposes of the system by talking of its antecedents and the developing social needs to which these efforts attempt to respond.

In the early 1970s, the State had become more interested in using management techniques to provide educational services, particularly in the field of occupational education. The ISS system, a forebear of ISSOE, was designed with this purpose in mind. He noted a more general concentration in education on the idea of "competencies." New York State's concern about competencies has resulted in the current position, that competency-based education has been mandated for statewide adoption. Now preeminent, ISSOE is wholly consistent with this general tendency in educational practice.

Occupational Education is an area in which competency-based educational techniques are of particular importance, because its programs are directly and intimately concerned with the changing needs of industry.

Mr. Cooke noted the State's current aims in regard to the ISSOE system. The identification of needs and the validation of materials will continue, and in themselves demonstrate a healthy sensitivity to the needs of business, labor and industry. In the coming years, responses from employers will provide the focus of attempts to involve occupational education programs more directly in the economic development areas of New York State. ISSOE has shown great promise as an essential ingredient in that application of an educational response to economic problems.

The first phase of ISSOE, the identification and codification of occupational competencies, is now largely completed in two pilot areas of automotive mechanics and office skills. The second phase, on which the project is now entering, requires closer cooperation between developers of the system, its administrators, and the potential employers of ISSOE graduates throughout the State. This involves the development of a Student Reporting System. The aims of the System are, first, to provide employers' reactions for the instructor to use in classroom management; and, second, to provide employers with a summary statement of what they may expect potential entry-level employees to be able to achieve.

Of crucial concern now are the perceptions of employers hiring at the entry level: and the major goal of the conference is to elicit reactions to ISSOE's Student Reporting System in order to refine and render more precise the information provided by the Student Reporting System.

Mr. Cooke requested that materials should be examined during the conference using the single criterion of clarity. This involves considering a number of questions. Do the various formats for a Reporting

System to be examined say what they purport to say? What do they omit that would be of use in making a hiring decision? What do they contain that is not pertinent to such decisions? The reactions of employers are of great importance in assuring the utility of the materials eventually chosen.

After explaining the way in which the worksessions would operate, Dr. Dunn summarized the earlier stages of the Cornell Institute's development of ISSOE materials. ISSOE grew out of, and in its early stages concentrated on, the more traditional areas of educational research, especially in task analysis and the development of instructional materials. Its focus now has shifted to more innovative concerns, notably instructional management and occupationally relevant systems of student reporting.

Dr. Dunn related these areas to the social context of education, speaking especially to the topics of the retention of students in school and the need to motivate older students. The move to competency-based education was to be interpreted in this context as a movement toward student accountability for individual educational advances. The particular needs of local systems of occupational education provided the immediate stimulus for the ISSOE system.

Last year ISSOE involved some 2,000 instructors and 40,000 students in fourteen regions throughout the State. Its rapid growth made mistakes inevitable, and recommendations for improvement are being sought continually. This conference is thus to be seen as forming one link in the ongoing chain of consultations with the various interested parties affected by ISSOE.

Dr. Vernon Beuke spoke to the topic of individualized education. Teachers are finding it both necessary and desirable to develop programs that more closely match the interests, and the occupational needs and objectives, of students. His charge has been to produce materials which would help ease this transition to individualized education.

The work is now concentrating on the development of practical materials for teachers. These materials would help teachers to identify relevant resources in their own and neighboring schools and make teachers more aware of their own abilities.

A crucial component of individualized education is the identification of an acceptable format that would combine the record of student and teacher choices and objectives and the evaluation of student achievements. To this end, Individualized Program Planning forms have been developed for review at the conference. Such a review would provide a necessary foundation for the field test of revised materials with employers on a statewide basis.

Dr. Beuke stressed that such plans, regardless of the format chosen, would not merely assist teachers and students: they would form an indispensable bridge between educational enterprise and potential employers of the graduates of such programs.

Dr. Al Edsall addressed the conference on the topic of the Student Reporting Systems. The preliminary field testing of early drafts of these systems conducted in the earlier part of the 1979 were discussed. These tests had provoked enthusiastic responses from teachers and students, suggesting the timelines of the project. After displaying and explaining the operation of the Student Reporting System, he noted the reactions of those who had already experienced the materials. Most students thought that the samples which they had seen were valuable for comparing their own work with that of other students and for demonstrating their progress to their parents and their teachers. An overwhelming number thought that the reports would be useful in their search for employment after graduation.

Teachers were also very positive about the materials. They thought, however, that the early versions involved too much paperwork. While recognizing the value of the system in increasing student motivation, many teachers indicated that they would suspend judgment on ISSOE until they had heard the reactions of employers to the materials and the use

that employers would make of the Student Reporting System in their hiring decisions. Thus the acceptance of the materials by potential employers is now of central concern in the development of the ISSOE SRS.

Dr. Dunn asked the participants in the conference to discuss and make comments about the materials to be offered to them, and the opening session adjourned. In the latter part of the morning, three worksessions were convened for more detailed examination of the ISSOE achievements. One group was formed of employers and personnel managers; the second of ISSOE regional coordinators and administrators; and the third of manpower specialists and placement counselors.

II. RESULTS OF THE INDIVIDUAL MEETINGS

A. Recommendations from Employers

(1) Any recruiting-system form that might be used on a statewide basis should include something about attendance and attitude of the potential employee.

Employers considered general attitude as significant as the particular skill-competency record of the applicant at entry level.

Employers of office workers stressed the importance of attitude, while employers of auto mechanics stressed that skill competency was most important for their entry-level employees.

(2) Instructors rating students' achievement in specific competencies should approach evaluation as an employer would.

Employers stressed that instructors should have extensive, up-to-date knowledge in their field. They should be continually renewed by regular exposure to innovations in their technical field.

(3) ISSOE should prepare a "Master Dictionary" of each occupational program for employers. This dictionary should identify the competency, specifying both the criteria for evaluation of the competency and the conditions under which these criteria were satisfied.

It was explained that the ISSOE curriculum package for each occupational program area would provide for this need

(4) Applicants at entry level should bring a resume to the job interview.

No standard form or format was suggested. It was, however, stressed that applicants who brought a resume with them to a job interview were assuring themselves a great advantage in their search for employment. The ISSOE Record of Achievement should be included as part of the resume.

(5) The ISSOE Record of Achievement which displays DOT Job Titles on the front and shows each DOT Job Title with corresponding ISSOE competencies is the preferred format for reporting student progress.

Employers of office workers felt that since, at entry level, they are seeking individuals with general work skills, a single check-mark could be used to indicate satisfactory performance. They discussed the usefulness of a four-point performance differential (Outstanding, Skilled, Satisfactory, Satisfactory with Supervision) and concluded that it provided a superior indicator of an employee's potential for advancement. Employers of auto mechanics also felt that this performance differential would be useful.

All agreed that the forms should fit local needs. Employers stressed that if the Student Reporting System is generally adopted, it would provide ongoing checks on the judgments of instructors. As instructors realized that their evaluations were being used in employment decisions, they would automatically expend more care on the evaluation of students. The system would thus stress the accountability of both students and instructors: such a circularity of reinforcement would be mutually beneficial and would help build relations between the various participants in the educational enterprise and the employment community.

Most employers participating were personnel directors. Several indicated that their companies had hired graduates of local occupational-education programs during the preceding years. Documentation of the skills of these appli-

cants had left much to be desired. References were solicited as a matter of course and employers generally were interested in the opinions of the instructors concerned. A general consensus emerged regarding the desirability of a standardized listing of competencies achieved by students. Also, a number of participants indicated that they had become aware of ISSOE before being invited to this conference.

B. Educators' Session

Dr. Dunn presented an overview of what has been occurring in the Institute to articulate the various options that can be used in implementing three components of the ISSOE Student Management subsystem: (1) the planning phase with the student, (2) the teacher's reporting of student progress, and (3) outputs for employability. In each area several options which would emphasize flexibility were discussed. It was stressed that there is no one way--there is a variety of possible ways. The main emphasis for this session was to obtain feedback from educators regarding which are the most feasible kinds of options. It was emphasized that it may be necessary to clarify goals of the students before they actually enter the programs.

Options for IEP

Two options for Individualized Educational Programs developed with the students to be involved in them emerged from the discussion: the first would use an open-ended form which would allow the teacher to add whatever competencies the student should complete and would have the advantage of flexibility; the second would use competency lists specifying the needs of various jobs according to DOT job titles and would have the advantage of saving time. As yet, all occupational education program areas have not compiled such competency lists.

Attitudes

It is essential that employers have an assessment of the student's attitudes. This is as important as the skill competencies a student may possess. The difficulty of assessing attitudes, problems relating to legal issues, and the question of whether instructors are teaching values and attitudes were discussed.

Support of Educators

The group expressed a willingness to support the whole approach including the individual program planning for the students. Educators expressed a feeling that there should be an orientation period before the individual student decisions become final--perhaps a month. This will result in a greater number of students persevering in the program they choose.

Educators also stressed that a guidance component should be worked into the system, and expressed a concern regarding an overload of paperwork if reporting periods are too frequent.

C. Placement Coordinators and Labor Personnel

This group looked at kinds of information issuing from the ISSOE project that could be helpful to employers and placement officers. The group preferred the ISSOE SRS form displaying DOT and ISSOE program competencies to other possibilities for reporting student progress.

Suggestions from Participants

Placement Coordinators and Labor Personnel contributed several suggestions for the improvement of the SRS forms:

- Before Placement Coordinators can legally release information on the forms, students must sign a release form.
- Attendance record should be added to the SRS form.
- Days, weeks, or contact hours of training the student has had should be included in the SRS form.
- The form should include the date of completion of the program, in order to satisfy the need to know the relevancy of the training.
- The form should indicate which training agency the student attended.
- The form should include previous work experience.
- The form should contain information on the student's attitudes--ability to accept criticism, ability to work cooperatively with others, understanding of the profit motive of business, and ability to understand, interpret and execute instructions (for instance, the instructions in an automotive manual).
- The form should report the speed at which the student can work, or the time it takes for the student to complete particular tasks.
- It should indicate whether or not the student owns the tools of the trade--this is especially important for auto mechanics.
- It should include safety considerations.

- There should be a separate sheet for each DOT Job Title.
- The form should indicate potential places of employment.
- It should indicate where the student could go to get up-to-date employment information.

Participants also pointed out that it would be necessary to look into security procedures to keep students from filling out their own forms.

Finally, participants discussed the possibility of schools sharing information with manpower people, and suggested that a copy of the Individual Student's Record be kept at the BOCES or local school.

III. COMMENTS FROM THE GENERAL SESSION

Several valuable points were made at the General Session:

1. Some employers indicated that a "satisfactory" rating could be sufficient for entry-level workers, but if they are looking for employees to move up the ladder they prefer a system with gradations.

2. It is obvious that whatever system goes out in the field must have options to provide for local needs.

3. There was a great deal of similarity of recommendations across the groups; for example, the employability-skills question came up in all groups, and all groups discussed the need to report on the attitudes of students and the problem of an overload of paperwork.

4. Attendance and the proportion that that attendance represents of the total program should be reported. In addition to giving a percentage attendance, such as "98% attendance in the program," reports should indicate the total length of the program--whether it was a ten-week program or a twenty-week program, for example. This would let employers know not only the extensiveness of the program but also the degree of commitment of the student.

5. Employer stressed that, in addition to reporting the number of days or the percentage of times absent, the forms should indicate the frequencies of absences, because someone could have an accident or a serious illness and lose many days in one contract; two weeks of absence might mean ten consecutive days, and this might be more significant than one day a week.

6. Information about the Student Reporting System should be disseminated on a local level using whatever mechanisms are available. For example, when the Industrial Management Council meets in Rochester, most of the

personnel directors in the county attend; if ISSOE were to take advantage of this opportunity to explain the Student Reporting System, then personnel directors would recognize the SRS documents when they see them and know how much credibility to give them.

7. SRS forms would provide information about job applicants at entry level. Employers would use them as a guide, but would not regard them as the final word on the applicant. Obviously, employers would also talk with the individual. An applicant with a very good record might prove undesirable at an interview. Nevertheless, employers look upon the Student Reporting System as a good guide for hiring at entry level.

8. ISSOE is trying to develop uniformity to benefit the student. The student should achieve the same level of competence for a given job regardless of where it is taught in New York State. If students transfer from school to school in a similar program, they should still accomplish uniform competencies.

Capsule Summary by Peter Cooke

I will not repeat what was partially summarized previously. Needless to say, the work on this particular aspect of ISSOE will continue. It will be useful for employers; it will be useful for students; it will be useful for teachers. From our point of view at the State Education Department, it is one small element of which we can say to employers: "Look, we're trying to take these extra steps, though in the past, perhaps, we haven't been sufficiently aggressive." So from our point of view it is an extremely important element.

In terms of the actual employment decision-making process of firms, we're also very happy to say: "Look, this is one element that will become a little more sophisticated, a little more precise, to help employers make

better hiring decisions." If we can do that, we're successful. The elements that were stressed again and again, what the education people call the "affective areas"--such as job attitudes and punctuality--those we will begin somehow to build into the system.

I should explain to the groups that are representing business and industry here that there was a basic issue to us early in the game. Teachers were saying: "Look, we have to have a number of modules and tasks on employability-related skills." In the early stages, we said: "Yes, we recognize that; but employers are really concerned with what they are going to be paying an employee to do. They are not going to pay someone just to get to work on time." I'd be interested in any response to that question. Are the employers willing to pay someone who will merely show up, or is this simply a prerequisite--that one does, in fact, have to be there to carry out the skills?

The comments that have been made today, reinforcing the ones that we've heard before, certainly indicate that there will have to be an accomodation within the system to reflect attitudes on the profile.

Also, some of the employers were saying: "We don't need much detail--give us the general feeling and that's enough." And I was interested to hear those who were considering it very seriously saying: "I have to know exactly what sort of program a person went through in detail--the conditions and the criteria under which this person has attained a spectrum of skills." That's important, and it hadn't been reinforced to us previously.

Certainly we know that students do come into programs and move a great deal. We should do whatever we can to improve that initial placement so as to cut down on the amount of movement, even if it takes a month to place each student. Individualized Program Planning might assist in this area. It would certainly help on the educational side of things.

I believe that we are moving towards a set of common elements of things that are reported to employers, but I think also that we have to keep in mind the importance of flexibility and an ability to adapt forms and formats to those that are in place at the regional level or even at the local level. I don't think we're ever going to have the ideal form that will solve all problems or, in effect, accommodate all interests around the State. I think that we do have to keep flexibility in mind so that the system will respond as best as it can to regional and local needs.

I want to thank you, from the State Education Department, for your assistance, your participation, and your serious thinking. I hope that as the system becomes more elaborate and begins to be applied at a regional level, those who had a hand here will look up and say: "Hey, that's something that we asked them to put in." There's no reason why your participation and very active thinking shouldn't bear fruit.

Concluding Remarks

In his concluding remarks, Dr. Dunn thanked the participants for coming and said that the Institute hopes to engage in more extensive field-testing of the SRS this coming fall and winter in an effort to improve SRS forms and procedures. He predicted that participants in the conference would soon see the Student Reporting System in action.

In Attendance

Arthur Berie, Director, Kodak Office, Rochester
David Boykin, Brown Hauser Auto Sales, Painted Post
H. Clint Davidson, Jr., Dir. of Personnel, Univ. of Rochester
John Hawkins, Personnel Mgr., Taylor Inst. Co., Rochester
Salley Hubbad, Personnel Dev. Consult., Corning Glass, Corning
Richard Sampson, Mgr. Training and Devel., Ingersoll Rand, Painted Post
James F. Sweeting, Chrysler Corp., Syracuse

Doug Adamson, ISSOE Coordinator, Region 11, Elmira
Vern Beuke, Research Associate and ISSOE Project Director, Cornell Univ.
Lucretia Buccolo, ISSOE Coordinator, Region 7, Herkimer
Ann Cohn, Occ. Education Regional Planning, Region 11, Corning
Frank DiPrima, Supervisor, N.Y. State Employment Service, Rochester
Mike Divito, ISSOE Coordinator, Region 10, Rochester
Ruth Doran, Coord. Office Occupations, Syracuse City Schools, Syracuse
James Dunn, Director, Inst. for Occupational Education, Cornell Univ.
Al Edsall, ISSOE Project Director, Cornell University
Robert Frank, Research Associate, Inst. for Occ. Education, Cornell Univ.
Donald Goodman, Coord. Work Study, Central Tech., Syracuse
Angeline Gorman, ISSOE Coordinator, Region 6, Watertown
Roger Haydon, Editor, Cornell Institute for Occ. Educ., Cornell Univ.
Edgar Hollwedell, Dir. of Occupational Educ., Rochester City Schools
Hans Lang, Dir. of Occupational Education, Syracuse
Jean Marcotte, Placement Coord., Steuben-Allegany BOCES, Bath
Roger Matthews, Onondaga Computer Center, Syracuse
Terry Reilly, ISSOE Coordinator, Region 9, Oswego
Rod Richards, Project Dir. OERS, Onondaga Computer Center, Syracuse
Jim Rosa, Occ. Analyst, N.Y. State Dept. of Labor, Rochester
Rudy Schneider, Dir. of Occ. Ed., Steuben-Allegany BOCES, Bath
Pam Serio, ISSOE Regional Coordinator, Region 13, Belmont
Duke Zuzio, ISSOE Regional Coordinator, Region 1, Long Island